

VETERINARY PATHOLOGY:

OR,

A TREATISE on the CAUSE and PROGRESS of

THE DISEASES OF THE HORSE,

Together with the most APPROVED METHODS

OF PREVENTION AND CURE.

To which are added, short OBSERVATIONS on

Bleeding, Firing, Roweling, Fomentations, and Poultices,

AND AN

APPENDIX;

OR,

VETERINARY DISPENSATORY:

CONTAINING

THE MOST APPROVED PRESCRIPTIONS FOR THE DIFFERENT DISEASES OF THE HORSE.

The whole intended as a GUIDE and COMPANION to

THE GENTLEMAN VETERINARIAN AND FARRIER.

By WILLIAM RYDING,

VETERINARY SURGEON TO THE 18TH LIGHT DRAGOONS.

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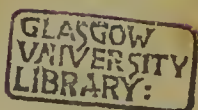
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Horses)



TO

EDWARD COLEMAN, Esq.

PROFESSOR OF THE VETERINARY COLLEGE.

SIR,

I HUMBLY presume to place this short Treatise under your kind protection, from a confidence that you will view all its errors with the eye of a father. I am the more led to this, from the consideration, that the Veterinary Art was in its infancy, and wanted a person of abilities to display its native beauty and utility; when, fortunately for these Isles, you was placed in a situation in which your talents became of eminent service to Mankind, in furnishing means for the preservation of so valuable an animal as the Horse. I am,

SIR,

Your most devoted

And very humble servant,

W. RYDING.

P R E F A C E.

WHILST the attention of the learned has been employed in investigating the anatomy and diseases of the foot, and making improvements in shoeing, little progress has been made in the other parts of the Veterinary Art, although it must appear obvious to every reader, and to the world at large, that a description of the cause and progress of the diseases to which that useful and valuable animal the Horse is subject; at the same time, pointing out such methods of practice as are sanctioned only by reason, and confirmed by experience, must be a very important acquisition to the public.

THE difficulty of composing a work of this kind, must appear to every one, when it is considered that I have only the symptoms of a dumb irrational animal to assist me, in distinguishing one disease

from another ; whilst the physician and surgeon have not only the knowledge of the ancients, the more recent improvements of the moderns, but also the information of rational beings, gifted with the advantage of speech.

IN looking into most of the works which have appeared on Farriery, I find that more attention has been paid to criticism and scurrility, than improvement : and though in different hands the subject has been dressed in different language ; yet on examining their contents, I find the authors to be merely plagiarists of each other.

As the Veterinarian has only symptoms, by which he can be led to distinguish the disease, I have been very particular on that important part ; having made it my principal study in a very extensive practice : and I flatter myself, that the practitioner will, in general, find my statements accurate.

IN this work I have been as concise and brief as possible, by leaving out all matter foreign to the subject, and confining myself to the statement of facts ; yet at the same time omitting nothing in my power which may tend to instruct and improve ;

for which purpose, I have frequently inserted cases, where I thought they would illustrate the subject.

IN the plan of this work, I have first endeavoured to describe the disease; secondly, to point out its cause. I next proceed to describe the symptoms, beginning with the most simple, tracing them in their progress to the most inveterate stages; and, lastly, to direct such medicines, diet, &c. as I have ever found most effectual for their removal.

IN the prescriptions, I have adopted the most efficacious medicines; and have likewise rendered them less complex, without depriving them of any part which I conceive might have been added with advantage. This, to those gentlemen who choose to depend on their own practice, will be a valuable acquisition, as well as to the Veterinarian and Farrier. For amongst such a number of recipes presented to us by different authors, all warranted infallible antidotes, we find it extremely difficult on which to fix; and, when the choice is made, find ourselves often disappointed, though some of them are said to have cost the publisher upwards of five hundred pounds.

IN colds, diseases of the lungs, and in many other complaints, a profusion of expectorant medicines are generally amongst the prescriptions directed by most authors for their removal; but it is a well-known truth, that the Horse is unable either to vomit or expectorate: and I can safely say, from experience, that such medicines tend more to oppress and increase, than to remove the symptoms or disease.

I LIKEWISE wish to show my marked disapprobation of the use of strong purgatives; by which too frequently more injury is done to the animal in a few hours, than can be repaired in as many weeks. They certainly are very useful in some cases, but never should be trusted in an unexperienced hand.

THE purges prescribed in this work, will be found to be composed principally of aloes, sometimes united with calomel. Jalap, gamboge, and scammony, I have not recommended; as their action on the Horse is not only extremely doubtful, but often injurious; and as aloes and calomel are found to answer every desirable intention.

SINCE I wrote on the treatment of Inflammation of the Lungs, in which I advised the practitioner to use gentle purges, joined with occasional mild

diuretics, I have seen upwards of fifty cases where that kind of treatment has been adopted, and proved so successful, as to exceed my most sanguine expectations; but previous to giving the medicine, the patient should lose from three to four quarts of blood, which may be repeated occasionally. This method of practice cannot be too much recommended, as it is a well-known fact, that inflammation of the lungs destroys annually more young horses, than all the other diseases to which the Horse is incident.

WHEN mercurials are given, it will be necessary to keep the Horse from being exposed to cold as much as possible; as mercurial medicines, by their tendency to pass off by the surface, make the body more irritable and susceptible of injury from sudden changes of temperature.

IN speaking of diuretics, it will be found that I have rejected the fixed alkalis, which only have a tendency to injure the stomach and intestines, and have confined myself entirely to the use of turpentine: On them we can always depend. The form, as it now stands, is simple, though not less efficacious: for by only increasing or diminishing the quantity, we can produce, to a certainty, a greater or lesser action of the kidneys.

I WISH strongly to recommend the use of antimony, as an alterative in colds, long-continued discharges of matter from the nostrils, and in all cutaneous diseases: and I am convinced, that its effects are rendered more permanent, when occasionally joined with mild diuretics. By its tendency to promote the secretions, and by removing obstructions in the most minute vessels of the body, it will be found to strengthen the appetite, improve condition, and preserve the horse from a number of diseases.

I HAVE purposely omitted the disease called Glanders, as I have at present little to offer on that subject; but hope to be able to say something on that disease at a future period; as I am collecting every information respecting its cause, progress, and cure, which observation and experiment can furnish.

I HAVE not entered into an inquiry or description of the different sorts of food usually given to horses; as I conceive it to be a subject so universally known, as not to require any information in my power to give.

IN this Work I have declined treating on the diseases of the Foot, and the proper method

of shoeing, as those important subjects have been thought worthy the attention of the present learned and judicious Professor of the Veterinary College; whose knowledge in those branches of the Veterinary Art has, by his late Publication, put the world in possession of every improvement of which the subject is capable.

I HAVE now gone over the outlines of this Work, and leave the candid reader to form his own opinion. Happy for me, if my labours may be in some degree of service to the Public, by preserving for them the life of so valuable and useful an animal as the Horse.



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VETERINARY PATHOLOGY.

INTRODUCTION.

OF all the quadruped animals, the Horse seems the most beautiful, as well as most useful; the noble largeness of his form, the glossy smoothness of his skin, the graceful ease of his motions, and the exact symmetry of his shape, have taught us to regard him as the first and the most perfect of the brute creation; and yet, what is very extraordinary, if we examine him internally, his structure will be found more different from that of man, than any other quadruped whatsoever: for as the ape approaches us the nearest in internal conformation, so the horse appears to be the most remote.

THE horse is very much injured by blows upon the ears or stifle, and also by strong purges. His

diseases are, in general, more violent than those of man, and they terminate much sooner. He recovers his natural strength; from a state of great debility, very rapidly. His stomach, though assisted by the great length of his intestines, seem only to extract a tincture from his food, and appear to be incompetent to complete digestion.

His constitution is naturally adapted to heat, seldom arriving at any great degree of perfection in cold climates. He is more subject to disease in England than on the Continent, or in warmer countries; which is principally owing to his being exposed to the frequent sudden changes of temperature to which this island is exposed.

AFTER the above observations, which we think may be useful to the practitioner, we shall endeavour to make some short remarks on the effect and usefulness of Firing, Roweling, Blistering, &c. and then proceed to the cause, progress, and treatment of the different diseases to which the Horse is liable.

On the actual Caution.

IN using the cautery, we have very much the advantage over those who practise on the human subject; for we have little to apprehend from inflammation or fever; as in many cases it would be impossible to remove the disease without its assistance: and however writers may attempt to censure its use, by affected feelings of humanity, we venture to assert, that to its potent effects the most inveterate ulcers, strains, spavins, and ligamentary lameness owe their cure, when every other application has been found to fail. The pain it causes is comparatively small, its effects immediate and powerful; and we can assure the reader, that, when prudently used, it is not attended with the least danger. In applying it to the legs, care should be taken not to let the iron burn too deep, so as to divide the skin, and the lines should be drawn perpendicular, about half an inch from each other.

On Roweling.

WHAT may be understood by roweling, is only a simple incised wound, (not penetrating the muscle) made in any depending part of the body; which, by its lips or edges being kept open, by

the introduction of extraneous substance and stimulating medicines, (spirits of turpentine,) a constant supuration is promoted. This discharge is evidently from the whole system ; and if the rowels are numerous, and long continued, produce great debility.

It will appear from what has been said, that roweling may be of service when matter is suspected to be forming in some of the important parts of life ; such as the lungs. Roweling, by lowering the system, and promoting absorption, may carry the matter into the circulation, and be thrown off by the common emunctories, or may determine its action to a less important part. Roweling, by its tendency to promote absorption, will be found serviceable in swelled legs, or where a discharge has been long continued from an ulcer ; which, if suddenly stopped, may do great injury, without an artificial drain is procured in some other part of the body. In such cases, before the rowels are removed, a course of mild alterative medicines should be adopted.

WE have seen modern authors advising rowels in the chest for inflammation of the feet ; but by what means rowels in the chest, or any other part of the body, can remove the diseases of the feet, we

are at a loss to account. This, we think, is one of the many errors which crept into practice, when people were ignorant of the nature of the foot; and has been handed from father to son, each taking it as a fact, and inserting it in his works, without giving the subject a proper degree of attention.

On Blistering.

BLISTERING is another powerful stimulant, and is excellent in strains, windgalls, spavins, and sometimes in inveterate grease; it will likewise be found of great advantage applied to the throat, and under the jaw, in strangles, colds, coughs, &c. and much superior to rowels, when applied over the chest in inflammation of the lungs. The best blister is that which is composed of fresh powdered cantharides and oil, or purified hog's lard. The common proportion is, one part cantharides to two of oil or lard; and it is attended with this advantage, that it never destroys the roots of the hair, which is too frequently the case with those which are composed of sublimate euphorbium and of oil of organum, which often leave a blennish that can never be removed. By adding or diminishing the quantity of the cantharides, we can make it more or less powerful, if required.

On Fomentations and Poultices.

FOMENTATIONS and POULTICES are very useful applications for removing inflammation, promoting suppuration, &c. The first need to be simple warm water only, as it will answer every purpose of its application, if persisted in for a due length of time ; and where poultices are required, the common bran, boiled in water one hour, and used when sufficiently cold, or with an addition of linseed meal, will be found the best. The poultice should be changed when it is become cold, and repeated as often as found necessary.

On the Teething of Horses.

AS it is a well-known fact, that most animals are subject to violent diseases during the time of teething, so too much care cannot be taken of horses at this time : for it is observed, that until the age of five years, when the teeth become complete, they are subject to the most dangerous diseases; such as violent colds, strangles, inflammation of the lungs. Young horses being naturally more irritable than old horses at this time, the irritability is much increased, the circulation from exertion is much more rapid, and the glands more liable to become obstructed. To prevent

these disagreeable consequences, they should frequently take three or four drams of aloes made into a ball, with the addition of a little ginger and soap; their diet should be rather low, avoiding giving them at all times large quantities of corn, and sudden violent exercise; they should be kept as much as possible in a moderate degree of temperature, and never be permitted to remain any length of time in a hot stable.

Of Inflammation in general.

BY well understanding Inflammation, we shall be led to the knowledge both of the cure and causes of many diseases. The assemblage of symptoms of local inflammation are; first, an increased action of the heart and arteries, redness, (this, though it evidently takes place, is not perceived in the horse, owing to the thickness of the skin, and covering of hair,) tension, swelling, accompanied with a painful sensation, tending to acute pain; this depending more or less on the degree of sensibility and irritability of the parts. This pain is increased by stretching or pressure; a distinct pulsation is also felt. These symptoms are always present in a greater or lesser degree, and are sometimes carried to so great an extent, as to impede or hinder the functions of parts.

WHEN inflammation is general, together with the increased action of the heart and arteries, there is an hard, full, strong, and frequent pulse: Blood that is drawn from a vein, remains longer fluid; but when become firm, its surface is covered with a whitish appearance, which is commonly termed buff. The patient's tongue is dry and white; there is also great thirst, accompanied with loss of appetite.

THE causes of local inflammation are violent blows, falls, sprains, various kinds of wounds, and substances entering those wounds. It may also be derived from a general affection, as fever of the lungs; but the most frequent cause of inflammation in the horse, is from sudden change of temperature, or it may arise in a part without any apparent cause. In inflammation, the vessels of the part are enlarged, and are generally increased in number: in consequence of the enlarged size of the arteries, more blood is sent to the part; and if the part be glandular, the secretion of the gland is increased, the sensibility is increased, and parts that were before insensible are now, in this unnatural state, become irritable and painful.

THIS action is most probably in the small vessels at first; but the larger ones are certainly concerned

in the action, as the inflammation increases. The pain depends much on the structure of the part; for where it is confined by horn, as in the foot, or under fasciæ, it is much more acute. The swelling is produced by something thrown out by the exhalant arteries into the inflamed part, and which is the coagulable lymph and serum. The lymph coagulates, and the serum transudes into the surrounding cellular membrane, so that where the cellular membrane is loose, the swelling will be greater, as it also will in a depending part.

INFLAMMATION may terminate in resolution, adhesion, suppuration, and gangrene; sometimes producing a disease worse than inflammation, and at other times preventing a disease. When the increase of action, pain, swelling, and tension gradually subside, without any evacuation of matter, this is called terminating by resolution; but this cannot take place without the parts are entire, and the irritating cause removed. It is necessary to the keeping up of inflammation, that the cause should be increased, otherwise the parts, becoming accustomed to the cause, will return to their natural functions. This fact may be very well illustrated by the friction of an horse's collar. This, before the parts are accustomed to it, will produce such irritation as, even to lay the parts raw; but, after

a short time, unless the degree of friction be increased, there will not be the least irritation produced. It may terminate by bleeding; but this is seldom the case with the horse, except it be procured by the lancet. It may terminate by an enlarged secretion; for instance, in inflammation of the membrane of the nose, we often find a larger secretion of mucus, and sometimes of a matter similar to pus. It may also be resolved by the smaller vessels throwing out a large quantity of the thinner part of the blood. If this should happen in the thorax, it may produce a dropsy of the thorax; if in the cavity of the abdomen, a dropsy of the abdomen. We should therefore always endeavour to prevent this kind of termination.

TERMINATING by adhesion, is the union of parts, without the medium of granulations. This process may take place in the internal parts, from two inflamed surfaces coming into contact, or from the vessels of one inflamed surface throwing out coagulable lymph, which becoming solid, forms a medium into which vessels shoot; so that the vessels of one surface communicate with those of the other. This process may either constitute, prevent, or cure a disease. It may constitute disease, by forming an unnatural adhesion; may prevent it, by stopping the progress of inflammation; and

may cure, by uniting divided parts. Inflammation, when it takes place internally, and when it happens in a vital part, most commonly terminates by adhesion.

WHEN adhesions have taken place in any of the internal viscera, they will be in time considerably elongated, adapting themselves to the motions of the parts: For instance, we happened, in March, 1799, to be at the dog-kennel belonging to his Royal Highness the Prince of Wales at Brighton, at the time a horse was killed for the hounds; when, upon the thorax being opened, we found the left lobe of the lungs adhering to the plura, covering a circle of more than three inches diameter. Upon inquiry, we found that the animal, when living, had shown no symptoms to indicate such an adhesion, having regularly performed his daily labour, his extreme age being the only cause of his destruction*.

When inflammation takes place in cellular parts, the lymph is thrown out; which coagulating immediately, forms a kind of boundary, by plugging

* These internal adhesions seem to give little pain, and may prevent the whole cavity of the thorax or abdomen from going into suppuration.

up the different cells. By its uniting property, it seems to prevent the surrounding parts from going into inflammation; and when suppuration takes place, it prevents the matter from getting into the cellular membrane, by plugging up the mouths of the cells, and by becoming solid. This is illustrated by every large abscess, where we can always discover a kind of boundary, formed by the lymph limiting the size of the abscess in a certain degree. This lymph, if the inflammation has not run very high, will soon be absorbed; but if there has been a considerable quantity thrown out, it may remain for a length of time before the tumor it forms is subsided.

By increased action of inflamed parts, (exceeding that which produces adhesion) pus is formed. It has been said, that extravasated blood has been the cause of producing pus, or by fermentation taking place; but the most probable way of pus being formed, seems to be the following; viz. the vessels of the part taking on a peculiar action at this time, in consequence of the inflammation, have a power of secreting a peculiar fluid.

THE Grease is an illustration of this opinion; for we find, that if this disease has continued a length of time, and the inflammation has run very

high, the vessels of the fetlock, or pastern joint, take on the action of secreting horny substance, similar to those of the feet.

It seems necessary to the formation of pus, that the action of the vessels be increased beyond that producing adhesion; but still this increase of action should go no further than a certain degree: for we find, that if this action is carried to too great a degree, suppuration will not take place. It seems to be the intention of nature, in forming pus, to throw off some extraneous matter; pulsation is felt, and the pain is more violent in the part during the formation of pus. The constitutional symptoms are likewise increased, the pulse is hard and more frequent, and the fever augmented; the cellular part into which pus is thrown being taken up by the absorbents, or being broken down by the fluid which is thrown out, becomes mixed with it. The coagulable lymph sometimes remaining for a considerable time after the matter has been evacuated, before it is absorbed, hence that induration and thickness of parts from which pus has been evacuated. After pus is completely formed, the pain and swelling subside, as do also the constitutional symptoms.

THE period at which suppuration takes place

varies much, but generally, in a common abscess, about the fourth day. This, however, takes place sooner in a young horse than in an old one; it also takes place sooner in parts that are not glandular, and particularly in those parts that are near the source of circulation. Some parts do not admit of suppuration; for instance, a tendon: but if the inflammation runs to a great height, gangrene and mortification may ensue. It sometimes happens, after pus is formed, that neither the local nor constitutional symptoms abate; this may be owing either to the great irritability of the constitution, or to the matter being confined by bone or fascia. Pus is generally evacuated by an external outlet, or it may be taken up by the absorbents.

Pus is, when examined from a healthy sore or abscess, an unctuous, whitish, opaque, equal fluid, perfectly inodorous, much resembling cream, and of a sweetish mild taste. When examined by the microscope, its colour, like that of the blood, seems to depend upon a number of small round globules, nearly resembling those observed in milk, and which appear to swim in a fluid. The thickness of pus seems to depend upon the number of globules; greater quantities being always found in thick laudable pus. Its specific gravity is equal to about that of blood. It sinks very readily in water,

and will not unite with it in the cold of the atmosphere. Heat does not coagulate it, but it evaporates to dryness. The difference between pus and mucus is, that mucus is ropy, and has no globules, appearing through the microscope to be flaky; whereas pus in its healthy state, has no appearance of being ropy. The fluid in which the globules swim, differs from serum, in having no power of coagulating by the addition of sal ammoniac; from chyle, by its globules being larger, and not coagulating by heat; and from milk, by its not coagulating by the addition of rennet. In its healthy state, it is perfectly inactive, but is capable of alteration by disease; so much so, that it is often is very acrimonious, and will corrode the parts with which it is in contact.

Treatment of Inflammation.

THE first consideration, is the cause of inflammation; the second is, whether it ought to be cured; thirdly, in what state we should attempt the cure; and, fourthly, by what means.

THE consideration of these circumstances is highly important; and if we are able to discover the first, it will answer the two next. The necessity of attending to these circumstances, may be

seen from the effects of inflammation. In some cases it is salutary ; and should we attempt to remove it, we may destroy the patient. Those inflammations which produce critical abscesses, should not be resolved. When seated in the lungs, or in the liver, after a disease, or in any other vital part, suppuration should be prevented from taking place by every possible means.

WHEN it arises for the purpose of removing any extraneous body, it should be brought to suppuration ; though, if the symptoms should run very high, they should be lessened. It often arises from no apparent cause ; here it must be left, with regard to its treatment, to the surgeon's judgment.

WHERE inflammation arises from external violence, and where nature does not seem to have any particular intention in view, we should endeavour to bring it to resolution : this may be attempted during the first four or five days ; but this depends on circumstances. The first thing is the knowledge of the irritation : for if we can remove the cause of diseased action, the parts will return to their proper tone. If produced by pressure or friction, the cause producing it must be removed.

IF the natural secretion of a part is become acrimonious by inflammation, so as to excoriate any part, that part must be defended by oils, mucilages, &c. Oil of olives, almonds, spermaceti, linseed, and mucilages of gum-arabic and quinces may be applied ; the latter, if in a fresh state, is a very good application.

IF motion increases the inflammation, the parts should be kept at rest as much as possible. If it is increased by cold, the patient should be kept in a mild temperature. If the stimulus arises from the distention of parts, a continuation of fomentations, such as the constant application of warm water may be beneficial. Pure expressed oils are also found to have relaxant effects.

PAIN in general is only a consequence of inflammation, though sometimes it may be a means of continuing it, in proportion as the sensibility increases. Poultices of the simplest kind should be used, such as bran and warm water, or linseed meal ; the latter of these is preferable, from its not being so liable to become lumpy, and from not becoming sour. Opium and other applications, such as preparations of lead, are often used. When the parts are very irritable, these may allay pain. If opium is used externally, it ought to be

administered very freely ; for if it is applied in small quantities, it will sometimes increase the irritability. Lead not only tends to lessen the action of the parts, but also to lessen the powers, by producing permanent weakness. Cold is a great sedative, but if long continued, may produce mortification. Other applications, as decoctions of bryony, wormwood, acids, vinegar, the vitriolic and muriatic acid diluted, may be used with good effect.

RESOLUTION may be assisted, by increasing the circulation in a neighbouring part, as by using rowels, blisters, &c.

WHEN the inflammation is extensive, and has effected a vital part, and where the powers are very great, bleeding will have very desirable effects. In this case, the blood should be evacuated as quickly as possible, through a large orifice ; two quarts taken away in this manner, will prove more effectual than four quarts taken gradually. Bleeding should not be continued from the appearance of the blood being sily, for this appearance may take place from weakness.

WHEN inflammation has affected a vital part, we must be regulated in bleeding by the state of

the pulse. It should be small at first in quantity ; but should the pulse rise after it, as is sometimes the case, we need not be afraid of repeating it. Where the pulse is also hard, strong, and frequent, and the powers are great, bleeding largely must take place, and *vice versa*.

WHERE the urine is in small quantities, and of an high colour, we may venture to bleed. We should attend to the patient's diet ; warm mashs of bran, sometimes mixed with a few oats, and a little sweet hay, or grafs, will be found the best food.

MEDICINES producing nausea may be given, as tending to lessen the living powers ; such as tartar emetic, antimonial powder, nitre, acids, warm water, &c. will diminish the irritability.

GLISTERS and purgings are also a means of lessening inflammation ; but, in irritable habits, these should be used with caution : of these the aloetics and mercurials are preferable.

WHEN the whole of the constitution sympathizes, the same means must be pursued. When suppuration takes place, it may also be diminished by the same means.

ON WOUNDS IN GENERAL.

Of Incised Wounds.

ALL wounds may be divided into Incised, Contused, and Punctured; each of these require different modes of treatment. We shall first take into consideration the Incised, as being the most simple.

WHEN the wound is first made; and the cutting instrument withdrawn, a retraction of the parts, and bleeding, follow. If it is only through the skin and cellular membrane, the degree of retraction will depend on the tension of the skin; if muscular fibres are divided across, the retraction will be considerably greater than if the wound was made in the course of them. The bleeding will depend on the vascularity of the part, and whether the wound is made across the muscles, or in a longitudinal direction, as in the first case the large, but in the latter, probably only the smaller vessels will be cut.

AFTER the blood has flowed some time, the bleeding by degrees ceases, partly from the contraction, and partly from the lymph plugging up the mouths of the divided vessels; but in the small

arteries, bleeding most probably ceases from their contractile power. The pain depends on the sensibility and tension of the skin, which, of all parts, is most sensible of pain.

THERE is scarcely any case of fresh incised wounds, where we should not attempt union by the first intention*. Though there is often great difficulty in bringing and keeping wounds in contact, which is owing to our not being able to prevent the horse's motion, and principally from the panniculus carnosus muscle moving the skin. By this method, wounds which formerly were known not to be cured under five or six weeks, are now cured in as many days. We should always endeavour to remove the coagulated blood, before we attempt bringing the parts in contact, either by a sponge, or warm water; care being taken not to have the water too hot, lest we should bring on a return of the bleeding.

SOMETIMES we are unable to clear the whole coagulated blood away; and, should we persevere too much in our attempts, may do great harm, by increasing the irritation. A small quantity remain-

* Union by the first intention; is only the simple operation of uniting the edges of the wound either by the needle and thread, by bandages, or sticking plaster.

ing, should not deter us from attempting an immediate union. The surfaces should, if possible, be brought into contact before the oozing out of the lymph, and before a great degree of inflammation has taken place, otherwise suppuration may ensue.

For bringing and keeping wounds in contact, various kinds of sutures have been recommended; but at present only two are in general use, viz. the interrupted and twisted suture. In deep extensive wounds, the first of these is preferable; but in those wounds where much motion is used, the latter is of more service. A double thread, with the crooked needle, will, in general, be all that is required.

On the Suppurative Process in Wounds.

IN some cases, instead of union taking place by the first intention, the pain and tension increasing, we must, in this case, remove the ligatures, &c. and wait the event of suppuration.

SOMETIMES union may be impeded by extraneous substances in the wound; but, after their removal, it may be effected. These substances, if small, may be removed by a sponge and water;

but if they are large, we must attempt their removal either by the finger or instruments, and should a great chance of union appear, the wound may even be enlarged. If the extraneous body is too large to be extracted by the wound, but at the same time can be perceived in a different part, and nearly approaching to the skin, a counter opening may be made, provided the adjacent parts are not liable to injury from the division of large blood-vessels or nerves. If, however, there is a difficulty in extracting these extraneous bodies, attended with a chance of hæmorrhage, we must give up the idea, and wait for suppuration.

DRY lint, or fine tow, spread with Venice turpentine, are, in general, the best dressings we can apply; but, in some ulcers, lint may irritate the parts to a great degree, particularly where it is stuffed in; a mode of dressing very injurious, it being only necessary for it to be laid lightly on the surface. But as no matter is secreted on the edges of the sore, and of course the lint may be liable to adhere to them, an emollient ointment may be spread over it. It is an erroneous idea, that pressure in the beginning will assist in forming granulations; but, when they are formed, pressure may then be of service.

NATURAL retraction disposes the part to supuration, and healthy granulation.

IN large and deep wounds, and where inflammation runs high, poultices will be found serviceable. One disadvantage attends the use of them, which is the difficulty of applying them in various parts of the body : where they cannot conveniently be applied, fomentations may be used ; and we should consider, on taking off the dressings, whether they seem to agree with the sore, or whether it may not be proper to change them.

IN dressing wounds, we should be careful not to expose their surfaces too long to the air. We should also be careful in wiping off the pus, part of which may be suffered to remain, from having no noxious quality, and from appearing to protect the parts. The general health of the horse should also be attended to ; the bowels should be kept open ; and, if any great degree of irritability is apparent, bleeding may be used, and opium may be given. The parts should also, as much as possible, be kept at rest.

On Punctured Wounds.

PUNCTURED WOUNDS are much more difficult of cure than incised wounds, from the many different parts liable to be wounded, as skin, cellular membrane, muscles, nerves, tendon, &c. ; the external opening being small, if suppuration takes place, it is almost impossible for the matter to be evacuated ; hence fistulous ulcers arise.

IF any extraneous body is lodged in the wound, and there is great difficulty in getting at it without dilating the wound, or if matter should work its way to any of the surrounding parts, and we are not likely to do mischief, from the division of nerves, or large-blood-vessels, we may cut down upon it, and extract it ; but if danger is to be apprehended from the division of either of the above, we must wait for suppuration.

IF there should be matter lodged under the fascia, we should open it directly, and reduce it to a fresh incised wound.

IF a puncture should be superficial ; that is, if it should run under the skin and cellular membrane only, it will then be best to lay it open to its full extent.

IF it should penetrate through a muscle, it may be better to pass a seton through it, than to expose it to the air.

IF it becomes fistulous, it must be treated like any other fistulous sore.

Wounds of the Joints.

WOUNDS, if not penetrating the cavity of the joint, should be treated like any other simple wound, keeping the inflammation as much under as possible.

IF penetrating the cavity, they cannot be better elucidated, than by describing a recent dangerous case, which terminated successfully.

CASE.

“ ABOUT the latter end of May, 1799, a horse belonging to the Hampshire Fencible Light Dragoons, Colonel Thomas Cooper Everitt commander, unfortunately got one of his fore-feet over the chain in the stall, and being of a very irritable disposition, was very much injured, in attempting to extricate himself. Being informed that the horse was very lame, I went to see him; and, upon exa-

mination, found his near fore-leg punctured in the knee-joint, near the flexor tendon, and at every motion of the joint, the synovial fluid passing through the orifice as if from a syringe. The horse was immediately properly secured, and I passed the probe into the joint, with an intention to examine if any extraneous substance remained in the wound, as I had reason to suspect it was caused from a splinter of wood, but could perceive nothing.

“THE orifice being large, I had small hopes of success, but resolved on trying what effect the actual cautery would have, I got a piece of iron made into the form of a budding-iron, broad at the point, so as to completely cover the external opening, and blunt, that it might not penetrate too deep; which, being heated to a proper degree, I applied to the wound, taking care not to injure the capsular ligament, and over it a large pledget of tow was properly secured; two quarts of blood were taken from him, and opening medicines administered. His diet was changed to warm mash of bran, with a few oats, and a little good hay.

“I VISITED him every day, and was grieved to find the joint become very much enlarged, and the synovia continuing to pass through the pledget of

tow in large quantities, which I could only attribute to a diseased action of the glands.

“ ON the fourth day, the horse being again properly secured, I removed the dressing, and found the orifice of the wound still open, but so small, as only to admit a probe. The motion of the joint keeping the wound open, by continually forcing the fluid through it, induced me, once more, to apply the cauteries ; which being done, the part was covered, as before, with a large pledget of tow. But being alarmed at the increasing inflammation, and enlargement of the joint, I thought it necessary to apply a poultice on the fore part of the knee, so as not to cover the wound, for fear the eschar should slough away too soon. A little more blood was then taken from him, and some more opening medicines given.

“ FINDING the poultice prevented the inflammation from increasing, I continued it every day, but suffered the pledget of tow to remain on the wound about ten days, and kept the horse as much at rest as possible.

“ ON removing the dressing, I found the discharge completely stopped, and the wound filled up with healthy granulations. I then advised gentle ex-

ercise, and a solution of common alum in water, to wash the wound.

“THE horse, being still very lame, and the knee much enlarged, I ordered a strong blister of cantharides and lard to be applied round the knee, but not so as to cover the wound, with an intention, by the discharge it might produce, to relieve the part; and I found it had the desired effect. The horse was then sent to graze, and in two months, contrary to every expectation, got perfectly well, and one joint was scarcely to be distinguished from the other.”

Contused and lacerated Wounds

ARE seldom healed by the first intention, from the divided edges being unequal and ragged. The bleeding is seldom considerable; probably from the vessels being very much stretched before they were divided. The pain, swelling, and inflammation, are often very great.

THE first thing to be done is to remove any extraneous body that may be lodged in the wound; the parts are then to be brought as nearly into their natural situation as possible.

If a part seems so much lacerated or contused, that it appears unlikely to admit of a sufficient circulation being carried through it, so as to preserve its living principle, it will then certainly be advisable to remove it. Neither suture nor plasters should be used, unless there seems very good reason to suppose that union by the first intention will take place. The inflammation brought on by these wounds is very apt to terminate in mortification. We should, therefore, use every means in our power to keep it under, and encourage suppuration.

WHEN a muscle is wounded, it either generally soon heals by the first intention, or by suppuration and granulation; but wounds of tendons are much more troublesome, possessing very little vascularity, and therefore incapable of suppuration. Spirits of turpentine, in cases of wounded tendons will be found the best application.

It has been said, that a partial division of a nerve or tendon may be attended with very bad consequences; but these must arise merely from its being a punctured wound, in consequence of a tendon being wounded, a spasmodic contraction of the muscles may take place. Opium, in this case,

may be applied to the wound, and given internally, joined with other antispasmodics.

On Ulcers.

BY an Ulcer is meant a solution of continuity, with loss of substance, (not recently made,) discharging pus, or any foetid matter. They may arise from external injury, or from some local or general affection of the system.

WE shall, in this place, only notice those ulcers which secrete vitiated pus ; the callous and sinuous Ulcer.

THE cause of ulcers becoming vitiated, is in general owing to an indolent action of the parts, or from great irritation. The matter discharged is thin, and of a greenish colour : this is what is called Ichor. When there are red globules mixed with it, and it is very foetid, it is called Sanies. When it is more viscid, and the discharge is of a purplish colour, resembling coffee grounds, and foetid, it is termed Sordes. The ulcers discharging this matter are of a dusky red colour, and are attended with more pain and irritation, and the granulations appear pale and unhealthy. When the ulcer discharges vitiated pus, the edges thickened

and ragged, rising above the level of the skin, it called the callous Ulcer.

EMOLIENT applications to these ulcers will, in general, affect a cure, except when they have been of long standing : it will then be necessary to use stimulants or caustic ; such as spirits of turpentine, nitrous acid, lunar caustic, boiling oil of turpentine, or the actual cautery.

IT sometimes happens that the granulations, (commonly called proud flesh) when ulcers are healing, are too luxuriant, shooting out above the level of the skin. In this case, we must have recourse to escharotics ; such as mercury precipitate, or solutions of blue or white vitriol, verdigris, burnt alum, caustic in its solid form, or dissolved in water. After they are removed, dry tow, or tow spread with common turpentine, are the best applications.

THE sinuous ulcer is where there are several channels communicating with the ulcer, and discharging the matter secreted into it, and the matter from the ulcer passing into them, and keeping them distended, so that they cannot unite. These are generally caused from the matter of the ulcer

not having a free discharge, or by the improper application of bandages.

FOR the cure of these ulcers, it has been recommended to use injections; but they are often found to produce too great irritation.

WHERE we find bandages useless, or impossible to be applied, we must either use the seton, or lay them completely open; but when the seton can be drawn through the sinus, so as to give a depending orifice to the discharge, it is the best means of procuring an union of the sides.

On Fistulæ.

FISTULÆ most frequently occur to the horse on the extremity of the neck, commonly called pole evil, or on the withers; but may take place in any other part.

FISTULÆ is in general produced by bruises, causing abscesses, and forming sinuses.

WHEN sinuses have been of long standing, the granulations, on the inside surface, are very apt to become unhealthy, and secrete a thinish discoloured fluid, between ichor and pus, the orifices being

prevented from healing the edges, tuck in, and a degree of callosity takes place. The orifice is, in general, very small, and gives us no idea of the extent of the sinus.

A *FISTULÆ* is, in fact, a continuation of a disease, the parts being unable to remove the cause which first produced it, or its effects. *Fistulæ* may arise in any other part of the body, from extraneous matter lodged in a part, and continually keeping up a degree of irritation. As for instance, an exfoliated bone, or a bullet, &c.; or it may happen from a diseased state of the parts, which are deep seated, and are generally indolent, and slow in their union; as a diseased bone, tendon, ligament, &c. or from the matter in an abscess not meeting with a depending drain.

In the treatment of *fistulæ*, we should always endeavour to remove immediately the cause producing it, if it remain. A perfect exposure of the fistulous sinus, by incision, is then the next object, so as to allow a complete exit for the whole of the matter. We must next endeavour to bring it to the state of a simple ulcer, by pouring on the part oil of turpentine, or olive-oil, heated to such a degree as to produce eschar; afterwards dress with common turpentine spread on tow, and frequently

wash the wound with a strong solution of alum in water.

THE nitrous acid, or strong aquafortis, has been found very useful in fistulous ulcers; the parts being touched with a feather dipped in it occasionally, and the above-mentioned dressing applied afterwards.

Of Hæmorrhage, or Bleeding in general.

BY Hæmorrhage is meant an effusion of blood from any of its containing vessels, into internal parts of the body, where there is no outlet; or upon an external surface, rendered so by accident.

WE shall first consider those where external treatment may be applied. It may either be arterial or venous, or both. If it is from an artery, the blood is of a florid red colour; and if from a large trunk, it comes out in an interrupted stream, the bleeding from veins is of a darker colour, and comes out in an uninterrupted stream. The dark colour does not always prove it to be venous: for some times, though it will at first flow from a vein of a dark colour, yet the subsequent blood shall be of a florid red, owing to its passing from an artery to a vein.

BLEEDINGS taking place from arteries, are more dangerous than those from veins; and particularly

from arteries near the heart, and which lie deep. In a vein the circulation is slower; and as veins lie more superficially, bleeding is more easily stopped. Bleeding may take place either from a total or partial division of the coats of an artery, or from a diseased alteration of their structure.

BLEEDING may terminate by accidental, or by artificial means; or, if it is suffered to continue for a length of time, in death. When arteries are divided, if they are not large, bleeding soon ceases. This arises from the muscular fibres which enter their structure, contracting their diameters and lengths, so as to obliterate their cavities; the contractile power of them being greater than the impetus of the blood.

IN the division of the larger arteries, where the powers of the circulation, and the elasticity of the vessels are greater than their powers of contraction, we must not trust to it alone. It may sometimes stop the bleeding for a little time, but we may expect a return of it.

BLOOD may be stopped, from the accidental manner in which the vessels may be divided, as by violent laceration, and other causes.

It is observable, that, by instinct, all animals nibble off the navel-string of their young. Sow-gelders, in castrating, draw out the spermatic artery to a great length, and divide it with a blunt knife; yet, in neither of these cases, do we see bleeding take place. When nature is insufficient to stop bleeding, we must have recourse to artificial means, such as styptics, ligatures, &c.

STYPTICS are said to act in three ways. One is by disposing the vessels to contract; the second, by disposing the blood to coagulate; and the third, by coagulating the vessels themselves. The first of this class is preferable, when we may depend upon its effects being permanent. Amongst these may be ranked the spirits of wine, oil of turpentine, the vitriolic and muriatic acids diluted, alum, balsam traumatic; oil of turpentine is, however, most preferable. Of the second class we may mention the mild absorbent substances; as flour, lint, bole ammoniac, sponge; these, by absorbing the thinner parts of the blood, prove very useful. The third class are improperly called Styptics, as they destroy the vessels themselves, and produce eschar. Of this class are all caustics, blue vitriol, boiling oil of turpentine, &c.

WHERE there is great difficulty in getting at a vessel, we must apply the cautery, though much inconvenience may be produced by it; the impetus of the circulation frequently throwing off the eschar, and fresh bleeding ensuing. In using the cautery, we should be careful not to apply the iron too hot, as the eschar would almost immediately be thrown off, and the desired effect be frustrated.

THE treatment of hæmorrhages will depend on their causes. If styptic applications have been tried ineffectually to a large vessel, we must use a ligature. In internal hæmorrhages, the oil of turpentine has been found very serviceable. It may be given from one to three ounces, in a solution of gum arabic, or mixed with gruel. Opium, in this case, is seldom found useful. If the kidneys are wounded, turpentine may be given often, and in small quantities.

THESE are the chief ways of restraining bleeding: but we must recollect, that where bleeding takes place from a large artery, and we can take it up with a ligature, it ought always to be preferred to styptic applications.

On Sprains.

THESE next demand our consideration, as the horse, from the great exertion he is frequently obliged to undergo, is very liable to receive injury in some of his joints.

It is well known, that external force may be applied to a joint, so as greatly to strain and injure its ligaments, without absolute dislocation having taken place.

THIS, in general, is attended with extravasation and swelling, the cellular membrane becoming distended, from an increased secretion of synovia, especially where the capsular ligament is loose; as in the joint of the hock or pastern. This is often succeeded by inflammation, and loss of motion of the joint; at least there is considerable difficulty in performing it; these parts, before nearly insensible, now becoming highly sensible and painful.

WHEN the sprain is recent, bandages impregnated with the following mixture, may effect a cure:

Take sugar of lead, half an ounce; the best vinegar, one pint; rectified spirits of wine, four ounces: mix and shake them well together for use.

BUT if, after using this mixture and bandages six or eight days, no amendment is perceived, recourse may be to had the blister-ointment, which must be rubbed well in all round the joint with the hand, and may be repeated, if necessary, in eight or ten days; this seldom fails to effect a cure.

BUT if blistering the part fails, as is sometimes the case in violent strains, firing, in perpendicular lines, but so as not to penetrate through the skin, is our last resource.

THE following blister-ointment we have ever found the best: as it is easily made, and, if properly applied, has always the desired effect, and never destroys the roots of the hair.

Take cantharides in fine powder, one ounce; purified lard, if in summer, or the best olive oil, if in winter, four ounces; mix them well together for use.

THE above ointment may be made stronger or weaker, by adding or diminishing the cantharides.

SPRAINS are likewise the cause of those diseases of joints called Bog Spavin, Thorough-pin, and Windgalls; which being principally

enlargements of the bursæ mucosæ, and frequently communicating with the cavity of the joint, should never be laid open, although that operation is directed by almost every author who has wrote on farriery; as by that method very great inflammation, troublesome ulcers, and often incurable lameness is the consequence. The same method as directed for the cure of strains, will be found the most beneficial in all these cases,

On Bone Spavin, Splints, and Curbs.

A Bone Spavin is a deposition of bony matter taking place on the inside of the hock-joint of all, but most frequently happening to young horses, causing lameness in a greater or lesser degree. The danger is in proportion to the quantity of bony substance thrown out, and to the nearness or distance it may be from the joint.

THE reason that young horses are more subject to this disease, appears to be principally owing to the bad method of shoeing made use of in most parts of England; for the common practice is to make the outside of the shoe much thicker than the inside; and, to complete the mischief, the outside heel is often turned up, which deprives the horse of a level and easy tread, and the

joint not having attained its proper growth and firmness, is easily twisted or bent inward.

BUT we find that spavin sometimes takes place on the joints of horses that have never been shod ; this is owing to the carelessness of the owner, in permitting the horses to continue in the field a number of months, without paying any attention to their feet ; which frequently growing irregular, deprives them of a level tread.

THE feet of young horses, when at grass, should never remain unexamined above a month, or six weeks at most ; and at that time all irregularities of growth should be removed. By this means the natural beauty of the foot will be preserved, spavins and splints prevented, and the horse early accustomed to the operations of the farrier.

THE consequences of the above causes are, that the head of the metatarsal or cannon bone becomes inflamed and enlarged : this proceeds from extravasation taking place in the interstices of the bone, as is the case in soft parts. When the inflammation is suffered to go on, it generally communicates its disposition to the neighbouring soft parts, and by this means the periosteum, cellular membrane, ligaments, and muscles, are changed into,

and increase the size of the bone. This process is called the adhesive Osific Inflammation.

THIS adventitious bone is easily distinguished from the real bone by the roughness of its surface; and it often becomes a cause of ankylosis, or union of the joint. Whilst forming, it gives but very little pain, and seldom materially affects the constitution.

SPAVIN, splints, and curbs, may likewise proceed from violent blows on the part, causing inflammation.

WHEN any enlargement on the inside of the hock is perceived, it should be examined with the strictest attention; and if bony substance is perceived to be forming, medicines which powerfully promote absorption should be immediately applied; such as equal parts of cantharides and lard, with which the parts should be kept constantly moist, until the swelling is removed; but if the disease has remained a length of time, the following will be found more beneficial:

Take sublimate mercury in very fine powder,
two drams; strong mercurial ointment,
four ounces; let them be mixed well together to make an ointment.

ONE quarter of the above ointment may be rubbed well upon the part with the hand, and repeated once a week ; and, after a proper interval, the whole may be repeated, if necessary. The body should be kept gently open, and one of the following mild diuretic balls, given every other day, for twelve or fourteen days ; afterwards, one every six days.

DIURETIC BALLS.

Take yellow resin in powder, one pound and a half ; common turpentine, one pound ; Castile soap, twelve ounces : dissolve the resin and turpentine over a slow fire, then add the soap, first cutting it in small pieces ; and after they are sufficiently incorporated, set them aside to cool, and form into balls.

THE common weight of these balls should be one ounce, the small balls about six drams, and the largest about an ounce and a half.

BUT if, after a sufficient trial, the above method should fail, firing, as recommended in the treatment of strains, must be advised, and the horse sent to graze.

Splints and Curbs.

SPLINTS are depositions of bone found on the middle of the cannon or shank bone of the fore-legs, but may likewise take place on the same part of the hind-legs.

CURBS are the same depositions taking place on the back part of the hock. The causes of these are the same as of bone spavin; and the treatment there directed, can only, in these cases, be of service; but when splints become very large, and cause great lameness, an expert operator may cut through the integuments, and remove them with a chissel, taking care not to injure the suspensor ligament, or tendon.

Recent Colds, or Catarrh.

THERE is not any disease to which the horse is more liable than that which comes under the above denomination. This disease is principally owing to sudden changes of temperature; and experience shows, that a sudden change from cold to heat is more frequently the cause, than from heat to cold.

IT will ever be found, that when a horse has

been exposed to a cold air all day, or perhaps for weeks, and then removed to an hot stable, and frequently covered with warm clothing, that the circulation will be increased to a great degree, whereby the glands of the nostrils become inflamed and obstructed; and only a thin humour, resembling water, is secreted, containing a quantity of neutral salts; which, as the parts are left undefended, act as a continual stimulus, causing great irritation.

In its incipient, or first stage, we observe that the nostrils look red and inflamed, and a thin humour is discharged. This is attended by a slight cough, and some degree of fever; the pulse is hard and frequent; a dulness of the eyes, sometimes with a defluxion of serum; a soreness of the throat; and food is often returned out of the mouth, owing to the irritation it causes.

As the disease and inflammation increases, the horse becomes very dull, and a listlessness to action takes place; the cough becomes more frequent; the glands under the jaw become inflamed and enlarged, and the fever increases, attended with costiveness. If the cough is violent, and long continued, it often lays the foundation of broken wind.

THE first indication of the cure of catarrh, is to lower the circulation, by taking away two quarts of blood, and afterwards let a moderate warm mash of bran, with a few oats, be put into a nose-bag, and secured upon the horse's head, so as to let the warm steam continually pass up his nostrils. This method of using the mash is evidently the best: for the warm steam lubricates the mucous membranes, sheaths and preserves them from the acrimony of the humours, and ultimately restores them to their proper action, by removing their tension.

THE intestines should be kept open by gentle alterative medicines; such as the following:

Take Barbadoes aloes, one ounce and a half; ginger in powder, half an ounce; soft soap sufficient to form the whole of a proper consistency: divide into four balls.

ONE of the above balls may be given every morning, until gentle purging takes place, and may be repeated occasionally.

IF the irritation and cough continues to increase, after a due attention to the above directions, which is not often the case, it will be necessary to repeat the bleeding; and if the glands

under the jaws become enlarged, the blister ointment may be applied, or a linseed poultice. If suppuration takes place, they may be opened with the lancet.

THE clothing should be moderately warm, and the patient should have frequent gentle exercise.

THE diet should be warm mash of bran, with a few oats; or warm water-gruel, and a little good hay.

BUT we frequently find when horses have often been affected with cold, that there will continue to be a discharge from the nostrils, of a thick yellow or whitish matter, resembling pus, attended with frequent coughing, which often continues a long time; and, if not removed, is productive of very disagreeable consequences, by causing diseases which are incurable.

FOR the removal of this discharge and cough, a continuation of the following medicine will be found very efficacious:

Take crude antimony in very fine powder,
one pound; grains of paradise, two ounces;
nitre, half a pound: mix them well together.

THE above medicine may either be made into balls, with mucilage of gum arabic, or honey ; or may be given in powder, mixed with their food. The dose is half an ounce, morning and evening.

On Fever.

FEVER is a general inflammation of the system, frequently terminating in suppuration, or gangrene of some of the internal viscera, and death.

FEVER may proceed from various causes ; such as a sudden change of temperature from heat to cold, causing spasm of the external vessels, whereby the perspirable matter becoming obstructed, is thrown back upon the circulation.

OR it may take place from the horse having been heated by violent exercise, and immediately permitted to drink a large quantity of cold water, causing general spasm.

It may likewise take place from violent pain in any part of the body : for instance, spasm of the intestines, external or internal wounds, &c. ; but this is only symptomatic.

THE particular symptoms attending fever, from

the two first causes, are a starting of the coat or hair ; an increased action of the heart and arteries ; great restlessness and inquietude ; great heat and thirst, attended by sweating, which is succeeded by universal coldness ; the tongue white and dry, or clammy ; loss of appetite, &c.

As the fever increases, the pulse becomes strong, full, and quick ; and sometimes intermitting, with a wildness of the eyes, difficulty of respiration, trembling ; and, in its last stages, a copious discharge of tears from the eyes ; the urine very high coloured, an exceeding quick and obstructed pulse, stupor, death.

THE progress of fever is much more quick in the horse than in the human subject, frequently destroying the patient in two or three days.

WHEN fever takes place from the above-mentioned causes, viz. sudden change of temperature from heat to cold, or the indiscreet use of cold water, our first care must be to lower the circulation, by taking from the patient two or three quarts of blood, and by administering such medicines as have a tendency to remove spasm, and promote perspiration, without increasing the cir-

enulation. For which purpose, the following prescription will be found excellent :

Take camphor, six drams ; nitre, and cream of tartar, of each two ounces : powder and mix them well together, and add honey sufficient to make the whole of a proper consistency, and divide into four balls.

ONE of these balls may be given every six or eight hours ; his clothing should be warm ; and his diet warm mashies of bran ; his drink should be warm water, with a little sweet bran or oatmeal sprinkled on its surface, or warm water-gruel.

His body should be kept open, by the following clyster :

Take Barbadoes aloes in fine powder, half an ounce : dissolve it in two quarts of strong linseed tea.

LET this clyster, a little warm, be thrown up the rectum, by a bladder and pipe, every five or six hours.

IF the irritation and fever continue to increase after the above treatment, (which is not often the case) a little more blood may be taken away, and

the camphor ball may be repeated, with the addition of ten grains of opium to each ball; or the following may be given with advantage:

Take purified opium, one dram; antimonial powder, two drams; nitre, and cream of tartar, of each one ounce and a half; honey sufficient to form the mass, and divide into four balls.

ONE of these balls may be given every six hours, and repeated, if found necessary.

IF the fever is attended with costiveness, twenty grains of calomel may be added to each ball, and the clyster continued. By these means the fever will be removed, and the vessels recover their proper action.

BUT as fever generally leaves the patient in a state of great debility, it will be necessary, in a few days after it is removed, to adopt a more strengthening diet; such as a mixture of bran, oats, and malt, sprinkled with warm water. And one of the following aromatic stomachic balls may be given every other day, which will complete the cure, and render the horse fit for duty:

Take grains of paradise, in fine powder, one ounce; ginger in powder, six drams; li-

quorice, anise-seeds, caraway-seeds, in fine powder, of each two ounces ; honey sufficient to form the whole of a proper consistency, and divide into eight balls.

Inflammation of the Lungs.

THE lungs are subject to inflammation, which is principally caused by sudden change of temperature from cold to heat, increasing the circulation to such a degree, so as to cause obstruction in their smaller vessels ; which, if not timely removed, frequently cause, or lay the foundation of broken wind, or terminate in suppuration or gangrene.

It may likewise proceed from extraneous matter passing down the trachea, or windpipe, producing violent irritation.

BUT it most frequently is caused, in young horses, by violent exercise, and high feeding.

THE principal symptoms arising from the above causes are, difficulty of breathing, with quick heaving of the belly, sometimes attended with a cough, the tongue hot and dry, the pulse full and quick, the fore-legs extended wide, the head

hanging down, and sometimes a discharge of matter from the nostrils, which frequently becomes yellow, a rumbling of the bowels, with costiveness; the extremities cold: and it is a characteristic symptom of this disease, that, during its continuance, the horse seldom or never lies down.

As inflammation of the lungs is quick in its progress, too much care and attention cannot be observed in alleviating and putting a stop to its bad effects.

If the action of the heart and arteries is very great, there may be danger of suppuration or gangrene. In this case, bleeding from the vein on each side of the neck, at the same time, and from large orifices, should immediately take place. Three or four quarts taken away in this manner, will be found more beneficial than six or eight quarts taken only from one vein. If the pulse rise after this bleeding, which is often the case, we may venture to repeat it in sixteen or twenty hours after, or according as the symptoms may direct, and let the following medicines be given:

Take antimonial powder, one dram and a half;
nitre and cream of tartar, of each one
ounce and a half; mix them well together,
and divide into four parts.

ONE of these powders may be given in a quart of linseed decoction, and repeated every two hours.

THE body may be kept open with gentle stimulating warm clysters.

THE horse should be kept in a moderate degree of temperature, avoiding, as much as possible, his being exposed to a current of air. His clothing should be rather warm, and he would be best in a place where he could have the liberty to walk.

HIS legs should be well rubbed half an hour, four or five times a day, with a cloth; and his diet should be warm mashes of bran, or warm water-gruel.

IF by this method of treatment the symptoms do not abate in two days, it will be necessary to take away a little more blood, and endeavour to prevent the formation of matter taking place in the lungs, by administering such medicines as powerfully determine the blood to the kidneys and intestines, and which also, by bringing on purging, opens the body, and finally removes the disease.

Take calomel, one scruple; antimonial powder,
half a dram; cream of tartar and nitre, of

each three drams: mix them well together, and dissolve them in a quart of linseed decoction.

THIS mixture may be given every two hours, until purging takes place; and its action may be promoted by the following clyster:

Take linseed, three ounces, boil it in four quarts of water half an hour; pass the decoction through a coarse cloth, and dissolve in it half an ounce of aloes in fine powder.

LET this clyster, a little warm, be thrown up the rectum two or three times a day.

BY this method of treatment, purging generally takes place in twenty-four hours, and the disagreeable symptoms gradually subside.

A ROWEL on each side the chest, will likewise be found very useful in promoting resolution.

AFTER the action of the physic is over, and until all the symptoms of the disease are completely removed, it will be necessary to keep the body open; for which purpose, the above-mentioned clyster may be used every other day, and the linseed decoction, with the nitre, cream of

tartar, and a few grains of the antimonial powder, may be continued with advantage.

WE are happy to say, that where the above method of practice has been adopted on the first appearance of inflammation of the lungs, it has always answered our highest expectation; and it has often been found to remove the disease in its more advanced stages.

Broken Wind.

IT frequently happens, that when the action of the blood-vessels of the lungs have been increased to a great degree, and the inflammation produced, terminates without suppuration or gangrene, that the coagulable lymph is extravasated, or thrown into, and plugs up a part of the air-cells, which prevents them from performing their proper functions, and the animal not being able to take in a proper quantity of air, is obliged to inspire twice in the time which before only took up one inspiration, and thus causes a double heaving of the flank or belly.

The other cause of broken wind is violent coughing, or violent exercise, immediately after the stomach has been distended with much food or

water. This causes great oppression of the chest, and difficulty in breathing, and a rupture of the air-cells is the consequence. These ruptured air-cells form on the surface or edges of the lungs, and are never completely emptied in expiration. When this is the case, the animal not being able to expel the air at one expiration, another immediately takes place, and is attended with a very high rising of the flank, which suddenly falls. This action goes on in regular succession.

It is observable, that large quantities of wind is found in the intestines of broken winded horses, which may probably be owing to the great and long-continued action of the belly.

FROM a consideration of the causes of broken wind, it must evidently appear, that it is an incurable disease, and our intention must be to mitigate it as much as possible. This is best done, by giving the animal small quantities of the most nutritious food and water at a time, and often, in the day; by these means preventing, as much as possible, pressure on the chest, to which may be added occasional doses of gentle purging medicines, to keep the body open.

Handwritten:
H. M. M. M.
H. M. M. M.

DISEASES OF THE LIVER.

Jaundice.

THE Jaundice, or *Yellows*, is a disease which seldom affects a horse ; farriers often mistake some other morbid affection of the system for this disease.

IN the human subject, it is principally caused by inspissated bile forming a concrete in the gall-bladder, and thereby obstructing the secreted bile ; but the horse, having only a small tube which conveys the secreted bile into the intestines, is not so liable to obstruction from concretes.

THOUGH the bile is not so liable to be obstructed, yet it sometimes takes place, and is more frequently caused by inflammation of the liver, than concrete. When this happens, the secreted bile becomes obstructed, and is forced into the hepatic veins, or taken up by the lymphatics, and carried into the circulation. This is discovered by the eyes appearing of a dusky yellow colour ; the mouth, lips, and saliva acquire a yellowish cast ; the animal is dull and sluggish, and refuseth his food ; his urine is of a dark brownish colour, and when on the ground appears red ; the animal

is very costive, his excrements hard, and have the appearance of a yellowish or greenish clay ; his pulse irregular with fever. The disease and fever increasing, end in delirium and death.

It has been the general rule, when the patient was affected with the jaundice, to let blood ; but bleeding, by producing great debility, and promoting absorption, must evidently have a tendency to increase the disease.

BRISK purges, joined with calomel, will be found of the greatest benefit in removing these obstructions of the liver.

Take Barbadoes aloes in powder, five drams ;
calomel, one dram ; mucilage of gum-arabic,
sufficient to make the ball.

Let the above be given every other day.

WHEN the horse has taken this medicine three or four times, and his eyes and excrements begin to change colour, leave off medicine, and give him nourishing food ; such as ground oats and beans, or a quantity of bruised malt, on which warm water has been sprinkled ; and, after a remission of five or six days, the following ball :

Take Barbadoes aloes, three drams ; calomel, half a dram ; ginger in powder, one scruple ; conserve, or honey, sufficient to make the ball.

FOUR of these balls may be made, and one given every week, which will, in general, complete the cure.

WHAT we have advanced respecting inflammation of the liver, is only to be understood as a partial or chronic inflammation. When it becomes acute, we can hold out very little prospect of relief ; it frequently destroying the patient in fifteen or twenty hours, which does not allow of any effectual operation of medicine.

WE will however endeavour to point out the best method of prevention : This acute inflammation of the liver arises from hot stables, and where a large quantity of moist litter is suffered to remain under the horse ; it is more frequent in barracks, where a great number of horses are together, than in the stables of gentlemen, where it very rarely happens.

It will be best prevented, by removing the causes above mentioned, and frequently giving the following gentle physic :

Take Barbadoes aloes, one ounce and a half ; ginger in powder, one ounce ; soft soap, sufficient to form the mass : divide into six balls.

ONE to be given every morning, until they gently purge.

THE symptoms of acute inflammation of the liver are, difficulty of breathing ; the mucus of the mouth very foetid ; swelling of the belly ; costiveness ; violent pain ; staggering, on being put in motion ; and sometimes palsy of the under jaw ; convulsions ; the eyes drawn into the head ; ending in death.

EXPERIENCE has shown, that, in this case, bleeding is attended with evident bad effects, and that we can only rely on small doses of calomel, about half a dram, with the same quantity of antimonial powder, and half an ounce of cream of tartar, frequently given, until gentle purging takes place : and we can safely pronounce the case favourable, if the patient is not destroyed before these medicines begin to operate.

DISEASES OF THE KIDNEYS.

Suppression of Urine.

THE diseases to which the kidneys of the horse are liable, may be divided into two; viz. a suppression, or a too copious discharge of urine: And, first, we shall consider suppression of urine.

THE horse is very liable to have his kidneys inflamed, from the great pressure to which his loins are exposed. Concretes of calcareous matter are more liable to generate and remain in his kidneys and urters, from their horizontal position: but the most frequent cause of the kidneys being inflamed, is from the indiscreet use of strong diuretics.

THE general symptoms observable in inflammation of the kidneys, are; universal coldness; restlessness; great sense of pain on pressure being applied to his loins; his hind-legs extended wide; frequent, but fruitless attempts to stale; his urine, if any is voided, it is in small quantity, and red; and upon examining, by introducing the hand up his rectum, his bladder will be found empty: as the disease increases, it is attended with quickness of

respiration ; full and quick pulse ; cold sweats ; paralytic affection of the hind legs ; frequently ending in death.

WHEN we find the patient attacked with this disease, our first care should be to lower the circulation, by taking away two or three quarts of blood, according as the inflammation is more or less violent ; and the following medicine may be given to open the bowels :

Take Barbadoes aloes in powder, half an ounce ; linseed meal, three drams ; ginger in powder, one scruple ; conserve sufficient to make the ball.

LARGE clysters of warm water should frequently be thrown up the rectum ; and his loins should be fomented with double flannels, dipped in warm water. No diuretics or blisters should be used, as they would only tend to stimulate the kidneys, and increase the disease. Two ounces of gum arabic powdered, and dissolved in two quarts of water, to which may be added half an ounce of tincture of opium, may be given three or four times a day. His clothing should be warm, and his diet warm mash of bran. When he begins to make water freely, a little nitre may be mixed with his drink, which will complete the cure.

IF the symptoms are not removed or abated in twenty-four hours, a little more blood may be taken away, and the above method continued.

Diabētis:

WE now come to consider the causes of Diabētis, or a too copious discharge of urine : the principal causes of which are, obstructed perspiration, causing a too great determination of serum to the kidneys, or from too long a course of stimulating diuretics. These cause a relaxation and alteration of the tone of action in their vessels : it may likewise arise from violent exertion.

THIS disease will easily be distinguished from others of the kidneys, by attention to the following symptoms : The surface of the body cold ; the coat rough ; loss of appetite ; a constant thirst, the animal often craving for water ; a frequent and copious discharge from the bladder, which is not truly urinous, but of a pale colour, and an insipid or sweetish taste ; his pulse is weak and quick, attended with a gradual wasting of his flesh. If the disease be of long standing, it is very difficult of cure. Warm mashes and clothing will be found of great service ; to which may be joined the following course of medicines :

Take Peruvian bark in fine powder, twelve ounces; grains of paradise, two ounces; gentian in powder, three ounces; honey sufficient to form sixteen balls.

ONE of these balls may be given every morning; and, if required, the whole may be repeated. The horse should be gently exercised every day.

Diseases of the Bladder.

THE Bladder of the horse is subject to spasm on its neck, and inflammation, producing different diseases. We shall first consider the latter.

INFLAMMATION of the bladder may arise from a diseased action of the mucilaginous glands which are between its coats, so as to prevent the mucus from being secreted in sufficient quantity, to afford protection against the irritation of the secreted urine. Or it may arise from calcareous concretes passing from the kidneys, by the ureters, into the bladder, causing violent irritation.

THE symptoms of inflammation from these two causes are much the same, viz. universal coldness of the extremities, frequently attended with cold sweats; pulse quick; his hind legs are extended

wide, with a constant attempt to stale, and the urine continually discharged, but in small quantities. This is owing to the kidneys continuing to secrete the urine ; and the smallest quantity, acting as extraneous matter, excites the bladder to contract and an endeavour to expel its contents. When this is the case, our intèntion of cure must be directed to the removing of the inflammation, and giving such medicines as may bring the vessels to their proper action.

THE inflammation may be removed by frèquent bleeding in small quantities, according to the strength of the patient. His drink should be mucilaginous fluids ; such as the following :

Take linseed bruised, half a pound ; pour upon it two gallons of boiling water ; let it stand until nearly cold, and strain it through a coarse cloth ; then add four ounces of gum arabic in powder, dissolved in one quart of boiling water, to the above, and stir them well together for use.

ONE quart of this mixture may be given every four hours, or may be used as his common drink. Large clysters of warm water may be thrown up his rectum with great advantage.

OPIUM has occasionally been found serviceable in this disease ; and, when deemed necessary, may be used in the following manner :

Take of the best opium in powder, one dram ;
linseed in powder, half an ounce ; mucilage
of gum arabic sufficient to form the ball.

THE above ball may be given every other day ; but if the disease proceeds from calculi, we have but small hopes of effecting a cure. We can only mitigate the symptoms, by a frequent use of the medicines before advised.

AFTER the symptoms are removed, a course of the balls, as recommended in page 82, may be given with advantage.

IN spasm of the neck of the bladder, the symptoms are similar to those of inflammation of the kidneys ; suppression of urine being the consequence*. This disease is easily distinguished from those of the kidneys ; by the hand being intro-

* This disease most frequently proceeds from a too long retention of urine on a long journey, or too long continued exercise ; the horse not being permitted to stale, his bladder becomes so much distended by the accumulating urine, as to lose its contractile powers.

duced up the patient's rectum, the bladder will be found much distended, which is continually increasing; and, if not speedily relieved, becomes paralytic, and is rendered incapable of its usual powers.

IN this disease we must abstain from the use of diuretics, and all fluids, as much as possible. Bleeding may be used frequently: large and often repeated clysters of warm water will be found very useful: opium, to the amount of two drams, may be given with advantage. But if the above methods fail, and the disease continues to increase, our last recourse must be to puncture the bladder, by the rectum, with a small lancet, which will give immediate relief.

DISEASES OF THE INTESTINES.

DISEASES of the INTESTINES may be divided into two kinds, viz. 1st, Cholic or Gripes; 2d, Diarrhœa or Looseness; and may proceed from different causes.

1st, *Of the Cholic or Gripes.*

THE cholic, or spasm of the intestines, may arise from violent exercise, or from the horse being permitted to eat too much green herbage, or from bad hay, new oats, &c.; or it may proceed from strong purgatives administered when the bowels are over-loaded with crude vegetable food. This kind of cholic is most dangerous, as it frequently, by causing violent inflammation, terminates in gangrene: it may likewise proceed from costiveness.

BUT from whatever cause it arises, it is attended with the following symptoms; viz. violent pain, and great restlessness; his extremities cold; the pulse rather quick, and respiration increased: he frequently attempts to lie down, but rises up immediately; his hind extremities are drawn under him; he frequently strikes his belly with his hind

legs, and always attempts to lie on his back and roll.

If inflammation takes place, his pulse becomes more hard and frequent, attended with a clammy dryness of the mouth and tongue ; partial sweats take place ; he continues to strike his belly with his hind legs, and to lie down, but never attempts to roll.

In all cases of gripes, it will be necessary to take from the patient two or three quarts of blood immediately, which may be repeated, if required ; and if not attended with inflammation, the following ball may be given :

Take Barbadoes aloes in powder, three drams ;
Venice turpentine, two drams : mix and
form the ball.

THE above ball may be repeated every twelve hours, if the symptoms do not subside, or until it purges ; and large clysters of linseed decoction may be thrown up the rectum with great advantage.

FROM two to four ounces of common spirits of turpentine, in two quarts of gruel, given after

previous bleeding, has frequently been attended with success.

If the inflammation is great, so as to endanger the life of the patient, we must bleed very freely and frequently; large clysters of linseed decoction should be often repeated, and the belly often fomented with flannels dipped in water, as hot as the patient can bear, without injury; and one pint of cold drawn linseed oil may be given every six hours. But no purgatives, or other medicines that have a tendency to stimulate, or cause irritation, should be given, as they would only be a means of increasing the disease.

His diet may be warm mashes; his clothing should be moderately warm; and, when unattended with inflammation, gentle exercise will be found very beneficial. But in inflammation of the bowels, exercise would prove injurious.

2d, *Diarrhœa or Looseness.*

IS a complaint in which the intestines are solicited to a too frequent discharge of their contents.

THE principal causes of diarrhœa are, previous costiveness; indigestion, which is known by bits

of hay, and slimy matter, or mucus, being mixed with the fæces; from violent purgatives; and from a too great secretion of bile.

THE symptoms are pain, flatulency, distention, and irritation of the intestines, accompanied with frequent purging; frequent and small pulse-heat, and thirst; sometimes cold sweats, attended with spasm of the bowels, and other parts of the body.

THE causes of diarrhœa being known, will point out to the practitioner the best method of cure. If it arises from previous costiveness, it may be only an effort of nature to ease the burdened intestines of the obstructing matter, and seldom proceeds to that degree so as to become dangerous: and the medicines in this case, (if any is required,) should be of the mucilaginous kind.

Take gum arabic, four ounces; dissolve it in four quarts of water; to this may be added a few handfuls of oatmeal: this may be his ordinary drink. His food should be equal parts of ground malt and oats, sprinkled with warm water.

AND the following mild purgative may be given:

Barbadoes aloes, three drams ; cream of tartar, three drams ; ginger, one scruple ; soap sufficient to make the ball.

If the disease proceed from indigestion, we must endeavour to restore the stomach to its proper tone of action ; for which purpose, let him take the following medicine :

Take grains of paradise in powder, two drams ; powder of gentian and powder of Columba, of each three drams ; powder of ginger, one dram ; honey, sufficient to form the ball.

THE above ball may be given every morning and evening, for six or eight days, or longer, if required.

If it proceeds from violent purgatives, we must use such medicines as have a tendency to allay pain, and are at the same time astringent and mucilaginous, so as to sheath the intestines from the irritating matter ; for which the following is excellent :

Take gum arabic in powder, one ounce, dissolve it in two quarts of boiling water ; and, when cold, add half an ounce of tincture of opium.

THE mixture may be given every six or eight hours : or it may be given in the form of a ball.

Take gum arabic in fine powder, six drams ;
pure opium, one dram ; mucilage sufficient
to form the ball.

ONE of these may be given every day, until the looseness is stopped. Let the patient's drink be warm gruel, which may be given immediately after the ball.

BUT if it proceed from a too great secretion of bile, which may be known by the bile appearing in, and tinging the excrements of a dirty brown or reddish colour, we must, in this case, endeavour to correct the liver, and at the same time to put a stop to the irritation ; for which the following prescription will be found very useful :

Take calomel, the best opium, of each half a dram ; linseed meal, half an ounce ; conserve sufficient to form the ball.

ONE of the above balls may be given every morning and evening until the disease is removed.

IN all the above cases, gentle exercise, with warm clothing, will be found advantageous.

Sleepy and Mad Staggers

ARE the same disease, only differing in degree, caused by pressure on the brain.

PRESSURE on the brain may happen from a too sudden change of temperature, increasing the action of the heart and arteries to a great degree, whereby the vessels of the brain become distended; or from extravasated fluid, from a rupture of some of its vessels, which may proceed from sudden violent exercise; or it may take place from a fracture of the skull by violent blows, &c. or from a diseased action of some of its lymphatics, causing hydrocephalus, or dropsy of the brain.

STAGGERS is sometimes caused in a milder degree by other diseases; such as jaundice, fever, indigestion, and sometimes from the stomach and intestines being much irritated by bots, worms, &c.

ON the first appearance of this disease, the animal becomes comatose or sleepy; and while standing, his head is continually hanging down; great listlessness to motion; dulness of the eyes; obstinate costiveness; and loss of irritability in a very great degree. This stage is what may be termed Sleepy Staggers.

BUT if this complaint is not soon removed, it becomes more violent, and generally terminates in what is called the Mad Staggers.

THIS stage of the disease is attended by a wild staring of the eyes; and when the animal attempts to move, he staggers, runs round, and falls down, as if drunk; delirium then takes place, attended with convulsions, and sometimes locked jaw; most frequently ending in death.

BEFORE we attempt the cure of the staggers, we must, by a strict and minute examination, endeavour to find out the cause. For if it proceeds from an increased action of the blood-vessels; from change of temperature; bleeding from a large orifice, or, what is better, from both veins of the neck at the same time, to the amount of four or five quarts, will be attended with the greatest advantage; and one of the following balls may be given immediately:

Take Barbadoes aloes in powder, ten drams;
calomel, one dram; ginger in powder, half
a dram; honey sufficient to make the ball.

THE action of the above ball will be much accelerated by warm clysters, composed of half an ounce of powdered aloes, to four quarts of water.

IF staggers arise from extravasated fluids pressing on the brain, the horse will, on attempting to turn or move his head, become delirious, stagger, turn round, and fall down. Extravasated fluids, or lymph pressing on the brain, is not easily discovered; though, upon the above symptoms taking place, we may, with reason, suspect this to have been the case. Our best methods of practice, in addition to the medicines, &c. above recommended, will be to cut the hair close on the top of the neck and head, and apply a strong blister, composed of equal parts of cantharides and purified hog's lard, which may be repeated.

IF the disease is caused by a fracture of the skull, removing the fractured part or parts with bleeding, and low diet, may effect a cure.

IF it arises from other diseases, such as jaundice, it is then only an effect. In these cases, we must use such medicines as are directed for removing jaundice.

Farcy

IS a disease of the lymphatic system. Diseases of the lymphatics seem at present to be very little understood, as well as the methods of cure; but that

they are subject to the same diseases as other vessels, viz. inflammation and suppuration, we think is evident.

IN the horse, a diseased action of these vessels constitute what is commonly called Farcy, which has been generally understood to be a disease of the veins, produced by sily blood; farriers having been led into this error, by observing it to proceed in the track of the external blood-vessels, and from being unacquainted with the course of the lymphatics, which always accompany the veins.

WHEN these vessels become diseased, they form corded tumours, which are called Buds*. These buds are principally, in the incipient stage, of the farcy, on the inside of the thigh, fore-arm, and on the neck and shoulders, beginning at the extremities, and gradually proceeding nearer to the source of circulation; their obstruction causing œdematose swelling of the legs; and, as it increases, the whole system puts on the same appearance.

THESE buds at first, when only in a state of inflammation, are very painful, but nearly insensible,

* These buds putting on a corded appearance, is owing to the great number of valves found in these vessels.

after suppuration has taken place; and, on opening them, matter resembling pus sometimes, mixed with blood, is discharged, and the opening forms an ulcer, which is difficult to heal.

WHEN, in its later stages, the horse loses his appetite, and becomes very much debilitated, the tumours break through the skin, and discharge a foetid sanies, and the nostrils become affected, which frequently terminates in glanders and death.

BEFORE we endeavour to point out the cause of farcy, an attempt to investigate the use of the lymphatics, which form a principal part of the absorbent system, may tend to throw some light on the subject. For as nature has formed vessels on the surface, and in the cavities of the animal body, for the purpose of secretion; so it has been equally provident in furnishing a number of vessels which perform the office of absorption, and which counteract any error of secretion.

THUS when fluids, or any other matter which may injure the animal œconomy, become extravasated, or thrown out in any of the internal cavities, or into the cellular membrane, it is frequently taken up by the lymphatics, and carried into the circulation to be thrown out by stool, urine, or perspiration.

THAT these vessels equally extend to the surface, is evident; for if turpentine be applied to the skin, it very soon passes to the kidneys, and is discovered in the urine by its smell; and a blister of cantharides has frequently been known to affect the urinary passages.

WHEN these vessels are gently stimulated, they will remove cartilage, bone, &c. as in spavin and splints; and obstinate diseases of the eyes often owe their cure to the action of these vessels alone.

FROM what has been said, we may conclude, that the causes of farcy are, principally, putrid matter coming in contact with the skin, altering the action of these vessels, and causing inflammation, &c. Change of temperature, by producing great debility, may be another cause. Want of exercise and cleanliness may have a tendency to produce farcy. It has been known to take place after the cure of obstinate grease*, and always from the absorption of the matter of glanders. In short, any cause producing long-continued debility, may produce farcy.

* Or by absorption of matter from old ulcers on the fetlock joints.

WE shall now endeavour to point out such a method of practice as we have found most beneficial in the cure of farcy.

As farcy generally takes its first rise in the extremities, and proceeds gradually until the whole system becomes affected, it will be the most advantageous method of practice, to endeavour to stop the progress of the disease on its first appearance ; for without we are able to effect this, little hope remains of the patient's recovery. For this purpose, we should draw a line the whole length of the diseased lymphatic on each side, with the common firing iron, heated to a proper degree, and then to open the tumours with the lancet ; or, which is better, the hot budding iron, and to penetrate deep, so as to divide completely the diseased lymphatic, and prevent any future communication ; and let the whole of the matter be pressed out of the orifice by the fingers.

THE ulcers which are formed by these means, may be washed clean with warm water four or five times a day, and after dressed with oil of turpentine, and the following course of medicine may be adopted :

Take common antimony in fine powder, one pound and a half ; nitre in powder, one

pound ; grains of paradise in fine powder, half a pound ; honey sufficient to form the mass of a proper consistency : and divide into forty-eight balls.

ONE of the above balls may be given to the horse every morning and evening ; his clothing should be moderately warm, and he should have a brisk gallop, to promote perspiration two or three times a day. His diet should be of the most nourishing kind ; such as bruised or ground malt, mixed with ground oats and beans, and good old sweet hay.

If tumours or buds arise in any other part of the body, the above treatment may be used ; and, if found necessary, the balls may be repeated. It will be necessary to keep the horse separate during the cure, as the matter of farcy is considered as infectious.

Grease.

THE Grease is a disease which more frequently attacks the hind legs of horses than the fore legs, but sometimes affecting both, causing inflammation, swelling, and ulcers.

The causes which produce the grease are, principally, sudden change of temperature, hot stables, too high or low feeding, joined to want of proper exercise and cleanliness; or it may proceed from some other disease in the constitution, or from a termination of inflammation, whereby the thinner parts of the blood may be thrown into the cellular membrane, and not being absorbed, falls down to the extremities.

ON the first attack of this disease, the hind legs appear œdematous, particularly about the pastern joints, and the cellular membrane is filled with a fluid; where, if from want of proper care, exercise, &c. it is suffered to remain, it becomes acrid, and causes inflammation, swelling, and tension. As the disease increases, the inflammation becomes more violent, the heels crack, and discharge very offensive matter, and the vessels take on the same action as those of the feet, and horny substances are formed on the fetlock joint; the edges of the cracked skin becomes callous, refuse to unite, and obstruct the growth of new flesh; and sometimes the inflammation runs so high as to affect the capsular ligament of the joint and the bones, frequently causing a stiff joint.

If this disease is in its incipient stage, the horse

seldom loses his appetite ; but, if in its more advanced stage, he becomes very thin, loses his appetite and rest ; being prevented by pain from lying down.

THE grease, in its first stage, is very easy ; but if permitted to remain long, will be found very difficult to cure.

OUR first care should be to remove the inflammation and tension, and by that means restore the vessels to their natural proper tone : for which intention, let a large poultice, composed of equal parts of bran and linseed meal, very warm, be applied all round the leg, and when cold repeated ; and on changing them, let the patient be gently exercised for half an hour ; if the skin is cracked, let any dirt which may be contracted by exercise, be washed away with warm water, and the ulcer be sprinkled with a little powdered alum, and then the poultice may be applied. This treatment may be continued ten or twelve days, or longer if found necessary ; at the same time let the horse take the following medicine :

Take Barbadoes aloes in powder, one ounce and a half ; calomel, one dram ; ginger in powder, two scruples ; honey sufficient to form two balls.

ONE of these may be given immediately, and the other after an interval of thirty hours. His diet, whilst taking the above-mentioned balls, may be warm mashes of bran.

THESE balls will gently purge and cleanse the intestines. It will be necessary, after the purging is over, to adopt a course of diuretics: six drams, or one ounce of the diuretic balls, page 60, may be given every other day, for a month, or until the cure is completed.

WHEN the inflammation is removed, the ulcers may be washed with the following mixture:

Take alum in powder, one ounce; Roman vitriol, one dram; water, one pint.

THIS mixture may be used three or four times a day.

IT sometimes happens, when the grease is become very inveterate, and a great quantity of horny matter is thrown out, that the above method fails of having the desired effect: in this case, the horn must be removed by the knife, or actual cautery, and the hair must be cut very close; and, after applying a poultice a few days, a blister, of equal parts of purified hog's lard, and finely-

powdered cantharides must be rubbed well over the parts, and the horse turned to grafs. The blister may be repeated every fortnight, until the cure is completed.

Mange.

THE Mange is a cutaneous disease, attended with eruption, and loss of hair.

THE causes of mange are sudden changes of temperature, hot stables, bad diet, joined to want of cleanliness, the perspirable matter being never properly removed, and frequently mixed with dust, &c. completely plugs up the external vessels, whereby they become obstructed, and a diseased action takes place. It may also be caused by infectious matter coming in contact with the skin.

THE principal symptoms of mange are, the horse growing very thin, without any apparent cause, attended with a starting of his coat; this is soon followed by eruptions, which discharge a thick yellowish matter, forming a kind of scurf, which peels off, and is succeeded by fresh eruptions, and the hair falls off. This, though partial at first, soon spreads all over the body, and is at-

tended with an itching, causing the horse to rub against every thing he comes nigh.

WITH due attention to cleanliness, the following medicines will very soon remove this disease :

Take prepared hog's lard, one pound ; sulphur vivum, half a pound ; fine powder of white hellebore, three ounces ; mix and add olive oil sufficient to make a soft ointment.

A NECESSARY portion of this ointment should be rubbed well with the hand all over the affected parts, or where there is the least appearance of any eruption, and repeated after an interval of three days. Two or three applications of this ointment are, in general, sufficient to complete the cure,

THE following medicine may be given with advantage in this disease ; it will be found excellent for removing cutaneous obstructions, improving the appetite, and promoting condition.

Take antimony in fine powder, eight ounces ; grains of paradise in fine powder, three ounces ; mix and add Venice turpentine sufficient to form the mass of a proper consistency, and divide into twelve balls : one of which may be given every other day,

As this disease is considered as being infectious, it will be necessary to keep the horse in a separate stable until the cure is completed.

Strangles.

THE Strangles is an inflammation and enlargement of the thyroide and maxillary glands, commonly attacking horses when they are from three to five years old, seldom later. It is supposed to be infectious; but this supposition is, in all probability, owing to the number of young horses affected at nearly the same time.

THE causes which have a tendency to produce inflammation of these glands are, any sudden change of temperature, high feeding, and violent exercise. These soon produce an increased action of the heart and arteries, particularly in young horses: by this means, the glands are stimulated, and their action increased to such a degree as to produce obstruction, inflammation, &c.: in this disease we always find the mucous membranes affected.

THE common symptoms attending strangles are, an enlargement of the glands under the jaw, and sometimes it extends to the glands of the neck; it then becomes more dangerous. These cause a

difficulty in breathing, and in degultition or swallowing; and his food is returned out of his mouth, owing to the irritation it causes on the larynx and plarynx, or top of the throat.

THERE is sometimes a rattling in the throat, dulness of the eyes, hard and quick pulse, with fever; the patient is in general constive, and a discharge takes place from his nostrils, attended with a slight cough.

ON our first perceiving an enlargement of the glands on the neck, or under the jaw, it will be necessary to determine whether we should attempt the cure by resolution or suppuration: If the glands are but slightly inflamed, it may be best to attempt resolution. For which purpose, let two or three quarts of blood be taken away immediately, and the following gentle purge be given:

Take Barbadoes aloes in powder, four drams; calomel, one dram; ginger in powder, one scruple: mix, and add mucilage of gum arabic sufficient to form the ball.

LET also the following blister ointment be applied to the parts:

Take hog's lard purified, three ounces ; ointment of yellow resin, one ounce: mix well together, and add cantharides in fine powder, one ounce *.

BUT if the glands are found to be much enlarged, it may perhaps be better to promote suppuration, by applying a large poultice, composed of equal parts of bran and linseed meal, made of a proper heat with hot water ; which may be known by a person being able to bear his hand in it without pain. This poultice may be changed as often as it becomes cold ; and when the tumour feels soft, and matter is formed, it may be opened with the knife or lancet in the most depending part, and its contents pressed out with the fingers ; the parts may be washed three or four times a day with warm water, and left to heal of themselves, which is accomplished often in a few days.

IN both these cases, the diet should be warm mashes of bran, gruel, &c. Warm cloathing, with gentle exercise, will assist much in promoting the cure.

* A part of this ointment may be rubbed well on the part with the hand, and may be repeated every three days, as long as found necessary.

Hide-bound, Bots, and Worms.

WHAT is understood by Hide-bound, may be said to be an effect rather than a disease; for its principal causes appear to be bots in the stomach, or worms in the intestines. These, if in great quantities, as is often the case, deprive the animal of his proper portion of nutriment, and keep the stomach in a constant state of irritation. Bad diet, inattention, and want of cleanliness, may likewise produce this disease.

IN this disease, the horse is observed gradually to put on the appearance of extreme poverty, without any apparent cause; he becomes dull and languid; he appears in a state of great debility, and sweats much, on being moderately exercised; his excrements become black and offensive; his coat starts, and his skin, by its complete adhesion, seems as if it were glued to his ribs*. It may be observed, that the appetite is seldom materially injured, except in the more advanced stages of this disease.

* One certain sign of the existence of bots and worms, is a yellowish powder appearing on the anus.

THE first intention of cure is, if possible, to find out the cause; for if it only arises from bad food, or want of cleanliness, a more generous diet, with a few gentle purges, to which may be added walking exercise, and proper attention to cleanliness, will, in a little time, effectually remove every appearance of this complaint.

BUT if it proceeds from bots or worms, which is most frequently the case, other means must be used; the most effectual of which we shall endeavour to point out.

As the bots are, when in large quantities, very destructive to horses, by depriving them of nutriment, preventing digestion, and injuring the stomach, in which they are generally found; and as little has been offered to the public respecting their origin, and the means by which they are conveyed into the stomach, we shall first endeavour to point out the information which recent observation has furnished respecting them.

THE bots are a species of fly-worm, produced from the eggs of the hæmorrhoidalis, a two-winged fly, of the genus *cæstrus*, and nearly of the size of the humble bee, which deposits its eggs in the rectum of horses, and occasions great torment to them.

THE worms of the human subject have not been longer known to the world than those of the horse; and the farriers, in all ages, who have undertaken the care of these valuable animals, have had their remedies for the long and short worm bred in their intestines. The short ones are the creatures here to be described; but though the world has so long been acquainted with their existence, it never knew their origin, till M. Vallisneri discovered, of late, that they were produced from one of these flies, by insinuating itself into the fundament of the horse. These flies always live in the open fields, and are seldom found near towns or houses; and this is the reason that those horses which are kept up in the stable in summer and autumn are scarcely ever found to be so subject to these worms.

IN the latter end of summer, and in autumn, these flies are found continually buzzing about the backs of horses in the open field, seeking an opportunity to deposit their eggs. Horses, at this season, are sensible of the business of this little annoyer, and have been seen, from the most quiet state, to jump, run about, and kick, only at the sound of the wings of one of these flies. This insect has been observed, when it has not succeeded in its first attempt, to fly with less noise towards a

single horse in another part of the field, slyly to creep under his tail, and to use some gentle titillation, in order to make the creature open his fundament; and, when a little open, has ventured to creep in, where she finds herself in a proper place for the depositing her eggs. After this the horse has kicked and capered, as if mad, and continued so for upwards of a quarter of an hour.

THE worms hatched from these eggs soon find their way farther up the intestines, and often penetrate into the stomach. After a sufficient time for acquiring their destined growth, they naturally quit the stomach, in order to get towards the lower part of the intestines, and are either voided with the dung, or of themselves crawl out.

THERE is nothing singular in the figure of these worms. They are larger than those of the common flesh-fly, and smaller than those of the ox-fly: they are somewhat of a conic figure, their heads being pointed, and their posterior part much larger; they are each provided with two crustaceous hooks, by which they lay hold, and pull themselves along, by that means, and adhere so firmly to the coats of the intestines, as to prevent their being forced out of their habitation by the fœces, before they are ripe for their chrysalis state.

WHEN these worms are only in small numbers in a horse, they do very little harm to the animal ; but there are seasons in which they increase to such vast numbers, that they become a very fatal malady. In some years, when horses have died of a sort of epidemical disease, after they have been opened, prodigious quantities of these worms have been found living in their stomachs, each having formed a sort of cell in its membranes, and all being lodged there, as close together as the seeds in a pomegranate. Nor need we wonder how such immense numbers should be found in one horse, since one female is able to deposit several hundreds.

WHEN these worms are fallen from the intestines, they crawl about till they find some place of safety, where they make a shell of their skin, and undergo all their changes ; whence they finally come out in the form of their parent fly.

FROM what has been said, it may be suspected, that all horses which have been at grafs during the summer and autumn, have received a quantity of these worms into their intestines ; and that it becomes evidently necessary that a course of physic should be adopted, on their being removed into a stable. For the destruction and removal of

these worms, the following medicine will be found most effectual :

Take yellow emetic mercury, one dram ;
liquorice, and linseed powder, of each half
an ounce ; syrup or honey sufficient to
form the mass ; and divide into two balls.

THE horse should be put upon a diet of bran
mashes before this medicine is given ; after which
let him take one of these balls, and the other about
forty hours afterwards. And when you have
waited about the same time for the operation of
the medicine, let the following brisk purge be
given :

Take Barbadoes aloes, from six to eight
drams ; calomel, one dram ; Venice tur-
pentine sufficient to form the ball.

By paying proper attention to the operation of
the above medicines, we may be able to judge if
it has the desired effect ; but if, after it is over,
we suspect that there are still some worms remain-
ing, a second course may be repeated in about a
fortnight afterwards.

DURING the taking of the above medicine, the

horse should be kept warmly clothed, and his diet mashes, with gentle exercise.

IF the horse is affected with common worms, the above course of physic will be found equally efficacious for their destruction.

Diseases of the Eyes.

IN speaking of the eyes, we shall only take notice of those diseases which it is in our power to remove; as we consider that a description of those which are incurable must not only be tedious, but also useless to the reader.

As there is scarcely any accident to which the horse is incident, which takes so much from his value as the loss of one or both eyes; so we shall endeavour, after pointing out the cause and effect, to lay down such methods of cure as we have ever found most advantageous.

WHEN the eye of the horse becomes injured by a violent blow, bite, &c. we first perceive the eyelids become inflamed, and often lymph is extravasated into the anterior chamber, or fore-part of the eye; soon after the vessels of the cornea, or outer part of the globe of the eye, become ob-

structed, and it loses its natural transparency. This is what is commonly called specks or film, which obstructs the sight, and sometimes produces total blindness.

WE often find this complicated disease very difficult to remove; for if we apply stimulants to remove the obstruction, by promoting absorption, which is the only method of curing the eye, we often increase the inflammation of the eye-lids to a great degree; and if sedatives be used to remove the inflammation of the eye-lids, we are in imminent danger of making the obstruction permanent, by lessening the action of the small vessels, and the obstructed matter, by that means, becoming fixed.

THE following method, in this complicated case, we have often found to answer every intention of cure:

LET two quarts of blood be immediately taken away; then let a gentle dose of physic be given, and let the eye, and parts about it, be fomented six or eight times a day, for three or four days, with warm water. This will in a great degree remove the inflammation of the eye-lids; after which let the following stimulating mixture

be injected with a syringe gently into the eye, three times a day :

Take white vitriol in powder, one scruple ;
rose or common rain water, eight ounces ;
tincture of opium, sixty drops : mix them
together for use.

It sometimes happens, that a more powerful stimulant is required ; for which purpose, a little common salt, very finely powdered, and thrown into the eye once a day, will have an excellent effect. A diuretic ball may be given every day, for a week, and the fomentations of warm water continued.

If the eye-lids are only inflamed, it may arise from cold ; and there is a discharge of tears, which sometimes becomes acrid. Sugar of lead, in the proportion of one dram to a pint of rain water, is the best application for this complaint, with occasional bleeding, and diet of opening mashes.

THE eye of the horse is likewise subject to cataract, or opacity of the crystalline lens, and to gutta serena, or palsy of the optic nerve. The latter may be discovered by the eye losing the power of dilating, or contracting its pupil : this is

incurable. The cataract, if in its incipient stage, may sometimes be relieved by a long-continued application of stimulant medicines.

It sometimes happens, if the eye has been much injured, that specks remain on the cornea ; and if they have been of long continuance, are very difficult to remove : absorption in these small vessels taking place but slowly, all the hopes of removal depends on a long-continued application of such stimulants as have been recommended, assisted occasionally with diuretics and gentle exercise.

THERE is another disease which sometimes affects the eyes of the horse, which seems to be constitutional, known by the appellation of Moon Blindness. This is discovered by our finding one of the eyes in a high state of inflammation, without any apparent cause : this in a few weeks returns to its natural state, and we soon find the other eye affected in the same manner, this keeps going on alternately, and generally ends in total blindness. All the hopes we have of cure in this case, are from often-repeated fomentations of warm water, occasional bleeding, and a course of mild alteratives, &c.

IF the external parts of the eye are wounded, the wound must be treated in the same manner as directed under the article Wounds.

Of the Membrane Nictatans.

NATURE, in forming the eye of the horse, seems to have been aware of the many accidents to which it would be liable, and has providentially provided for its security, by the addition of a muscle to draw it back into the socket, and by having furnished it with a cartilaginous substance at its inner canthus, which he can at pleasure, or when apprehensive of danger, thrust out, so as nearly to cover the whole of the eye.

THIS substance is commonly called the Haw; and, until very lately, has been considered as a preternatural enlargement, which has been attributed to different diseases; and, of course, has been by most authors directed to be dissected away, to the evident injury, if not total loss of the eye, and by that means destroying one of the best barriers which Nature had formed for its preservation.

On Roaring.

THIS is a disease not noticed by any writer we have seen, and takes its name from the noise the horse makes in breathing, when put into a brisk motion. This noise is owing to lymph being extravasated, and coagulating on the inside of the trachea, or windpipe, and by that means obstructing respiration.

THE principal cause is sudden, or long continued violent exercise.

IN its incipient stage, blistering the whole length of the wind-pipe may be of use; but when the disease has continued a length of time, it becomes incurable.

Broken Knees.

AMONGST the number of accidents to which the horse is liable, there is none more frequent than those which come under the denomination of Broken Knees, which very frequently leaves a blemish that is never effaced. This is often owing to an error of treatment.

WHEN the horse unfortunately meets with this

accident, the best method of practice is, to wash the parts which have been injured with warm water, to remove any extraneous matter; then let them be bathed with French brandy frequently for the first two or three days, and let the following ointment be applied over the wound with the hand, which will, by its gentle stimulating power, brace the parts, promote the cure, and facilitate the growth of hair :

Take cantharides in fine powder, one dram ;
olive oil, one ounce ; mix, and apply occasionally.

Mallenders and Sallenders

ARE so generally known, as to render a description useless. We shall only subjoin a prescription, which, if well rubbed on the parts affected, seldom fails to remove them at once or twice dressing.

Take strong mercurial ointment, one ounce ;
sublimate in fine powder, ten grains: mix them well in a marble mortar for use.

On Depraved Appetite.

IT is observed, that horses returning from grafs, but particularly at camp, have frequently depraved appetites, which shows itself by their fondness for sand, earth, or litter. If this appetite is permitted to be much indulged, large balls are sometimes formed in the intestines, which frequently obstruct the passage of the fæces to such a degree as to occasion death. When this depraved appetite is observed, it will be best to give the horse repeated small doses of laxative medicines.

The Distemper.

IN England, horses are extremely subject to receive injury from the sudden changes which take place in the temperature of the atmosphere, particularly during the spring and autumn quarters; the moisture of the air at these periods, combined with the heat, is very apt to produce inflammation of the mucous membranes, coughs, and sometimes inflammation of the lungs. When this inflammation and cough is attended with a discharge of matter from the nostrils, it constitutes a disease which is called the Distemper, for which every farrier thinks that he has an infallible antidote; but

it is frequently found, that a number of valuable horses fall victims to this disease; which we conceive may be owing to the error of treatment.

THE principal symptoms observable in the distemper are, first, a slight inflammation of the top of the throat, attended with a cough, which becomes more frequent and violent, particularly when the patient attempts to swallow his food; the action of the heart and arteries are increased, and the pulse is more quick and hard, with some degree of fever; the tongue is very hot and white, but not always dry, being sometimes covered with tough mucus; and when difficulty of breathing is joined to these symptoms, we have great reason to apprehend that the lungs are affected.

THERE is very little appearance of any enlargement of the external glands about the neck, or under the jaw, as in strangles, the inflammation being principally confined to the throat, windpipe, and adjacent parts, which appear much tumified and sore.

WHERE no medicines have been given, or any operation used, this disease terminates by a critical purging, but more frequently by a large secretion

of matter from the nostrils. The method of practice we have found most effectual for the cure of the distemper is as follows :

FREQUENT bleeding in small quantities, about three pints at a time, and a hair bag, containing a large mash, nearly scalding hot, should be fastened on the head and round the nostrils, so as the patient may inhale the whole of the hot steam ; and the mash should be changed four or five times a day. This will relax the inflammation of the throat, and promote a more free discharge of matter from the nostrils.

If there be much fever, which is generally the case, half an ounce of nitre, dissolved in two quarts of water in which bran has been steeped, may be given, a little warm, at one time, or used as his ordinary drink. And if there be any difficulty in his breathing, the bleeding may be increased to three or four quarts the first time, and afterwards in small quantities, or as symptoms may direct.

THE horse should be moderately warm clothed, and should frequently be gently exercised ; and if oats are given, they should be bruised, and steeped in hot water.

IN the place of hay, fresh grafs, where it can be procured, will be found the best diet, as it has a tendency to keep the body cool, and gently open the intestines.

APPENDIX:

OR,

VETERINARY DISPENSATORY,

CONTAINING

The most approved Prescriptions

FOR THE DIFFERENT DISEASES

OF

THE HORSE.

APPENDIX.

Nº 1.

Mild purging Ball.

Take Barbadoes aloes in fine powder, six drams; ginger in powder, one scruple; soft soap sufficient to form the ball.

THIS ball gently purges and cleanseth the intestines, without causing the least griping pain, and may be usefully employed when horses return from grafs, or where gentle purging is required. Two or three drams of aloes added to the above ball, makes the strong purging ball.

Nº 2.

Mercurial purging Ball.

Take Barbadoes aloes in fine powder, four drams; calomel, one dram; ginger in powder, one scruple: mucilage of gum arabic sufficient to form the ball.

THIS ball may be made stronger, if required, by the addition of half a dram to one dram of calomel, and will prove excellent where worms are suspected.

N^o 3.*Diuretic, or Urine Balls.*

Take yellow resin, Castile soap, Venice turpentine, of each one pound; dissolve them together over a slow fire; and, when sufficiently incorporated, set them aside to cool, and form balls.

HALF an ounce to one ounce and a half of the above may be given where urine balls are required; the common dose is one ounce. These balls are excellent diuretics, and may be given in gripes, swelled legs, grease, or in diseases of the eyes, &c,

N^o 4.*Stomachic Balls.*

Take Peruvian bark in fine powder, eight ounces; grains of paradise in fine powder, two ounces; gentian in powder, Columba root in powder, of each three ounces; honey sufficient to form the whole sixteen of a proper consistency, and divide into sixteen balls.

ONE of these balls may be given every morning, and will be found excellent for indigestion and loss of appetite.

No 5.

Improved Cordial Balls.

Take grains of paradise in fine powder, two ounces; ginger in powder, winter bark in powder, of each half an ounce; anniseeds, caraway-seeds in powder, of each an ounce and a half; liquorice in powder, two ounces; honey sufficient to form eight balls.

WHERE cordial balls are required, one of these may be given occasionally.

No 6.

Mild Camphor, or Fever Balls.

Take camphor, one dram and a half; nitre, cream of tartar, of each three ounces; mucilage of gum-arabic sufficient to make the ball.

THIS ball will be found excellent, given in the first attack of fever.

No 7.

Fever Powder.

Take antimonial powder, ten grains; nitre, cream of tartar, of each half an ounce: mix them for use.

THIS powder is excellent in inflammation of the lungs, or continued fever, given every two hours, in one quart of strong linseed tea.

No 8.

Mild alterative Powders for promoting Condition.

Take common antimony in fine powder, one pound; nitre, twelve ounces: mix them together for use.

ONE ounce of this powder may be given every night and morning in the horse's corn, previously sprinkled with water, to make it adhere, or made into a ball with a little tar; and will be found very useful in promoting condition, or removing any long-continued coughs, colds, or discharge of matter from the nostrils.

N^o 9.

Mild Drink for Pains of the Bowels, Loosenefs, or Difficulty in Staling.

Take gum-arabic in powder two ounces ; dissolve it in three quarts of boiling water ; when cold, add tincture of opium, half an ounce, and mix them well together.

THIS mixture may be given every six hours, in violent loosenefs, pains of the intestines, or where there is great difficulty in staling.

N^o 10.

Eye-Water, for Film or Specks.

Take white vitriol purified, two drams ; rose-water, one pint ; tincture of opium, three drams : mix them well together.

THIS tincture may be applied to the eye three times a day, with a feather or syringe, until the disease is removed.

N^o 11.

Mixture for Strains, Swellings, &c.

Take sugar of lead, half an ounce ; best vinegar, one pint ; rectified spirits of wine, four ounces : mix them well together.

A bandage may be kept round the strained part, and kept constantly moist with this mixture.

N^o 12.*Mixture for old Sores.*

Take spirits ammoniæ compound, three ounces;
soccotrine aloes in fine powder, one dram;
aquafortis, two drams: mix them in an
open vessel. After the aloes is dissolved,
keep it in a bottle, close stopped, for use.

THIS mixture will be found very useful in old
sores or ulcers.

N^o 13.*Blister Ointment.*

Take cantharides in fine powder, one ounce;
ointment of yellow resin, purified hog's
lard, of each two ounces: mix them well
together for use.

THIS is an excellent blister, and never destroys
the roots of the hair, and never leaves any blemish
on the part to which it has been applied.

N^o 14.*Strong Blister Ointment for Bone Spavin, Splints, &c.*

Take sublimate mercury in fine powder, two
drams; purified hog's lard, three ounces:
mix them well together for use.

N^o 15.*Digestive Ointment for common Sores.*

Take yellow resin, bees wax, Venice turpentine, of each half a pound; dissolve them over a slow fire, constantly stirring them, until they are completely united: set them aside to cool.

N^o 16.*Powder for removing Fungus, or Proud Flesh.*

Take blue vitriol, one ounce; common alum, three ounces: beat them together in a mortar to a very fine powder, for use.

N^o 17.*Ointment for Mange.*

Take purified hog's lard, one pound; sulphur four ounces; hellebore powder, one ounce and a half: mix them well together to form an ointment.

THIS ointment must be well rubbed on the parts which are affected with the mange, by the hand, and seldom fails to cure the disease in two or three applications.

N^o 18.*Common Clyster.*

Take Barbadoes aloes in fine powder, one ounce ; dissolve it in four quarts of linseed decoction.

THIS, slightly warm, is to be thrown up the rectum with a bladder and pipe: it in general answers any intention of stimulating clysters.

N^o 19.*Linseed Decoction.*

Take linseed, half a pound ; boil it in five quarts of water, until it is reduced to four quarts: strain it through a coarse cloth for use.

THIS decoction will be found excellent where a mild lubricating clyster is required.

N^o 20.*Opodeldoc.*

Take Castile soap, three ounces ; camphor, one ounce ; spirits of rosemary, one pint : dissolve the soap in the spirits with a very gentle heat ; then add the camphor in powder, when it is completely dissolved : keep it in a bottle, close stopped, for use.

N^o 21.*Volatile Opodeldoc.*

Take Castile soap, two ounces; compound spirits of ammoniæ, one pint; camphor, one ounce: dissolve the soap and camphor in the spirits, with a gentle heat, and keep them for use in a bottle closely stopped.

BOTH these liniments will be found excellent in recent strains, bruises, or tumours, on any part of the body. The method of application is, by rubbing a necessary quantity well on the part, with the hand, two or three times a day.

THE END.

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